

DLV3 - x

DLV3 - Constellation

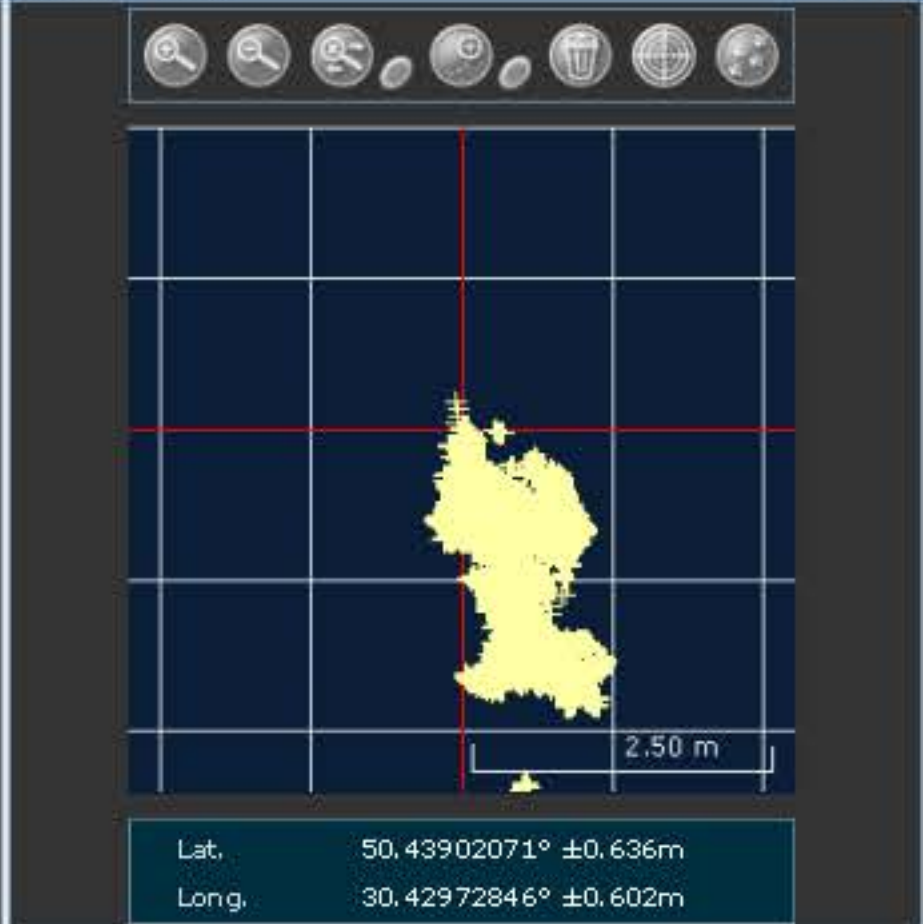


PRN	AZ	ELEV	C/No	STATUS
No SV				

DLV3 - Position

Latitude	50.43902071°	+/- 0.64m
Longitude	30.42972846°	+/- 0.60m
Hgt. (MSL)	188.620m	+/- 1.38m
Solution type	SBAS	
Iono correction	Multi-frequency	
Advanced RTK status	N/A	
Solution age	0 second	
Differential age	5 seconds	
# of satellites used in solution	11	
	GPS	L1 L2 L5
	GLO	L1 L2
Solution status	Computed	
Tue 17/11/2015 10:59:56 GMT Tue 17/11/2015 12:59:56 Local		

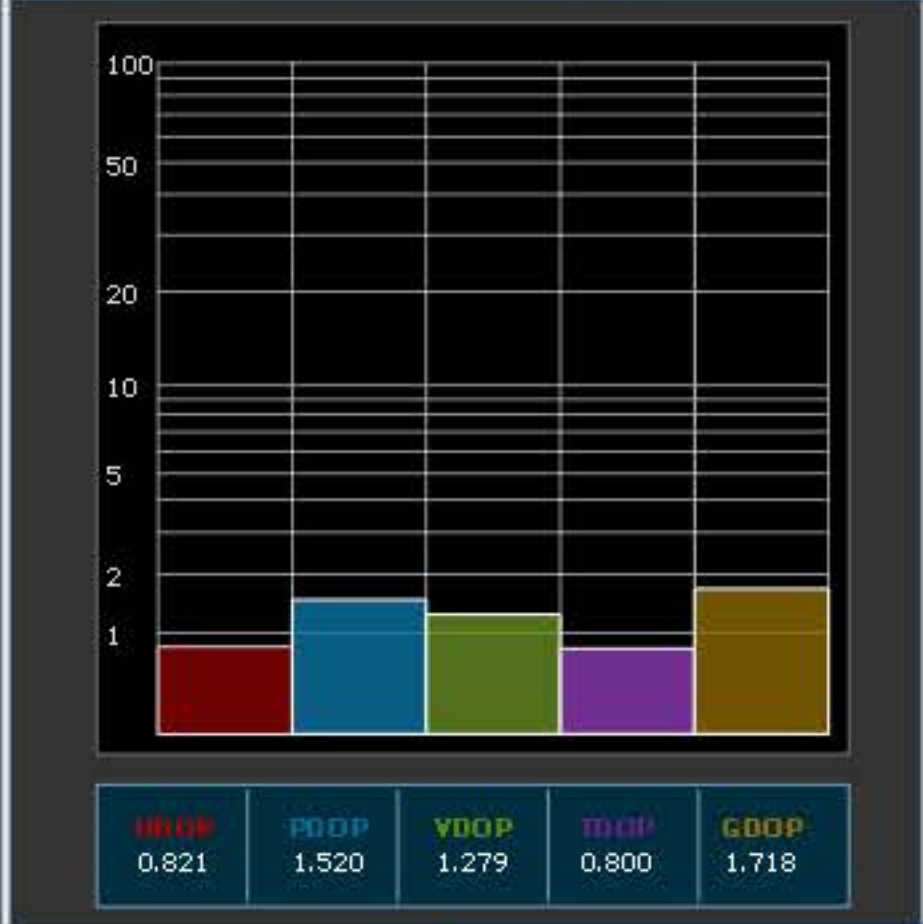
DLV3 - Plan



DLV3 - GPS Tracking Channel Status



DLV3 - Dilution of Precision (DOP)



Global View

abbreviation NAU
country Ukraine
city Kiev
site Laboratory satellite systems
comment Konin V., Shyshkov F. InsideGNSS, Jan-Feb 2015,
P.50 - 54
version 4.8.2
program Pegasus
date 22/11/2015

Range Domain

start: 07:47:28 17.11.2015 (week: 1871 sec: 200848)
end: 13:52:06 17.11.2015 (week: 1871 sec: 222726)
duration: 06:04:39 ..

quality

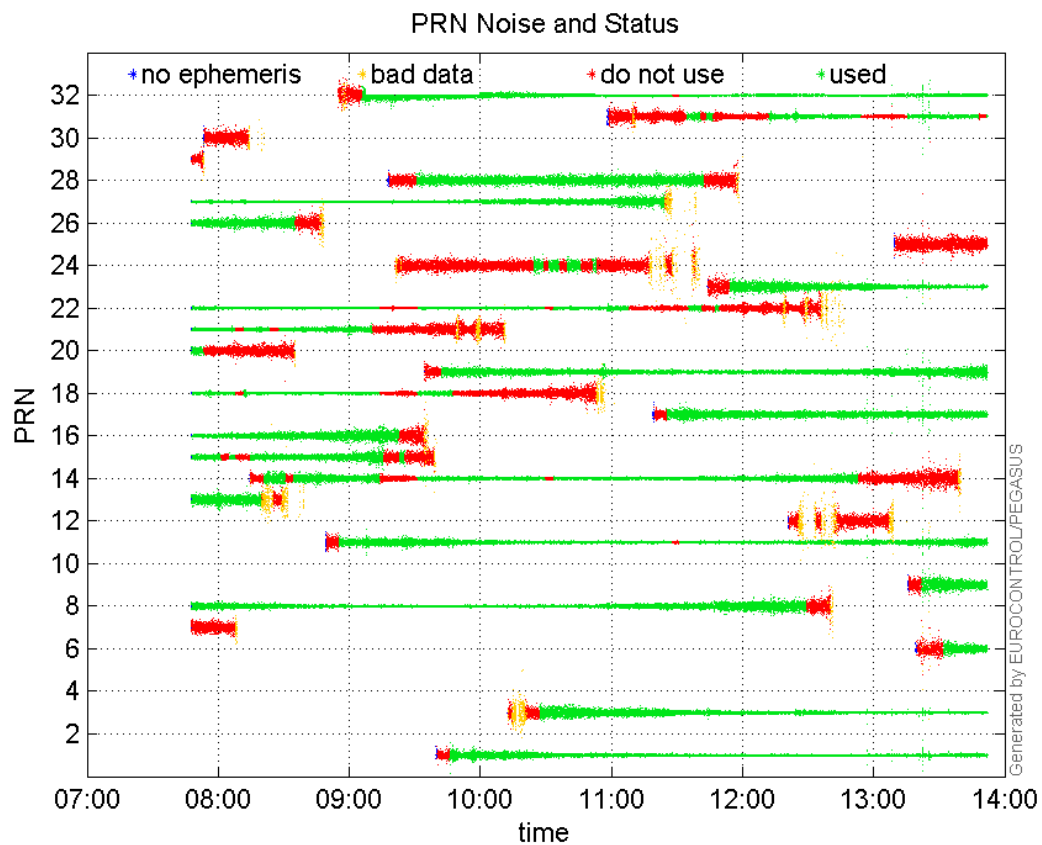
valid samples 21879
total samples 21879

PRN overview

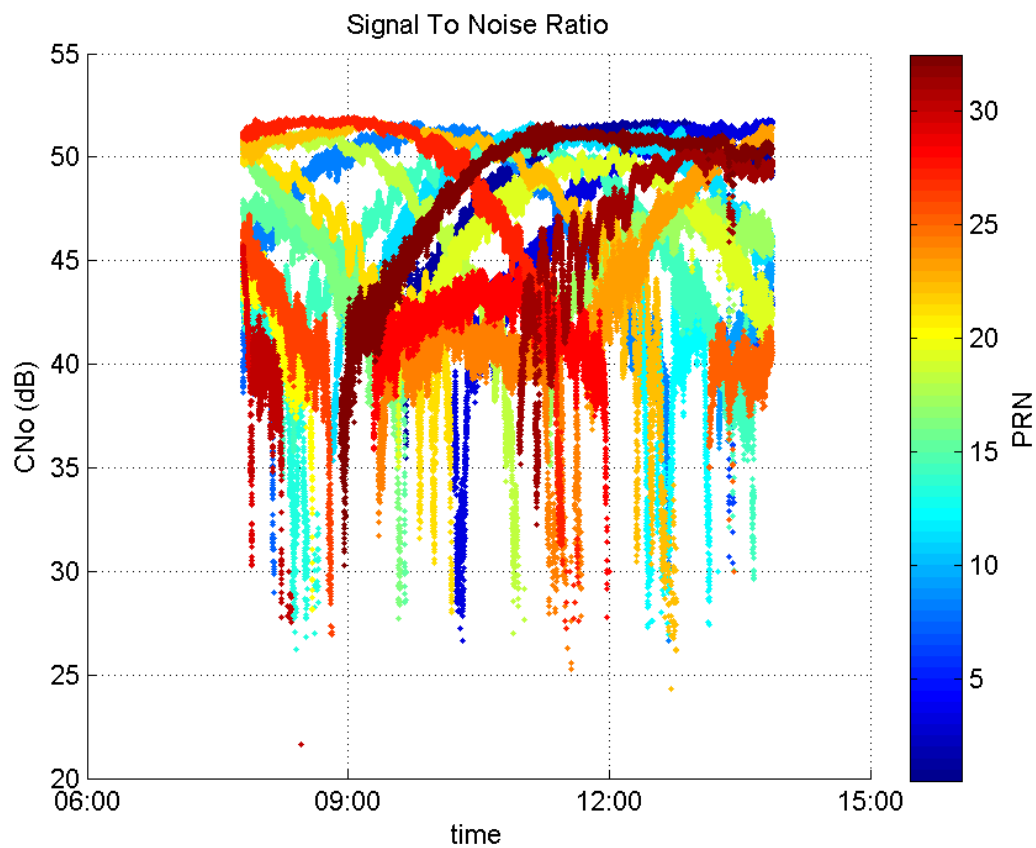
Number of Visible GPS Satellites 28
Number of Visible SBAS Satellites 2

signal quality and status

PRN Noise and Status:



Signal To Noise Ratio:



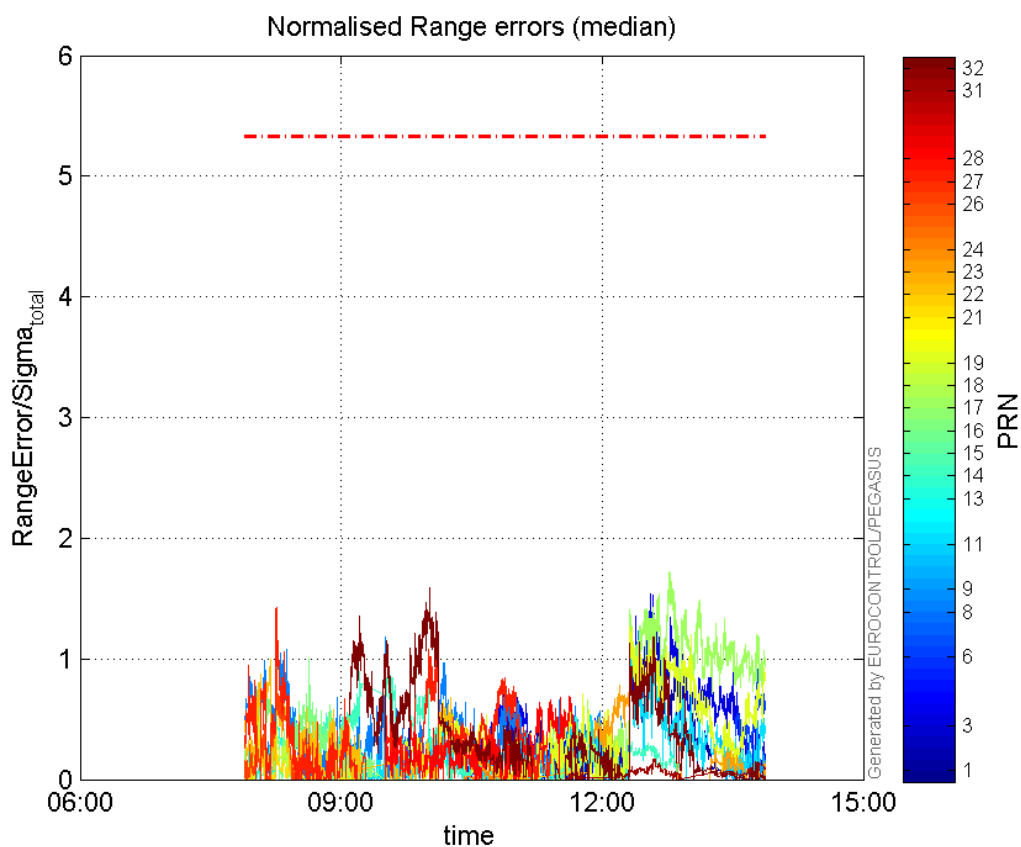
range errors

Number of Overbounding Norm Errors 0

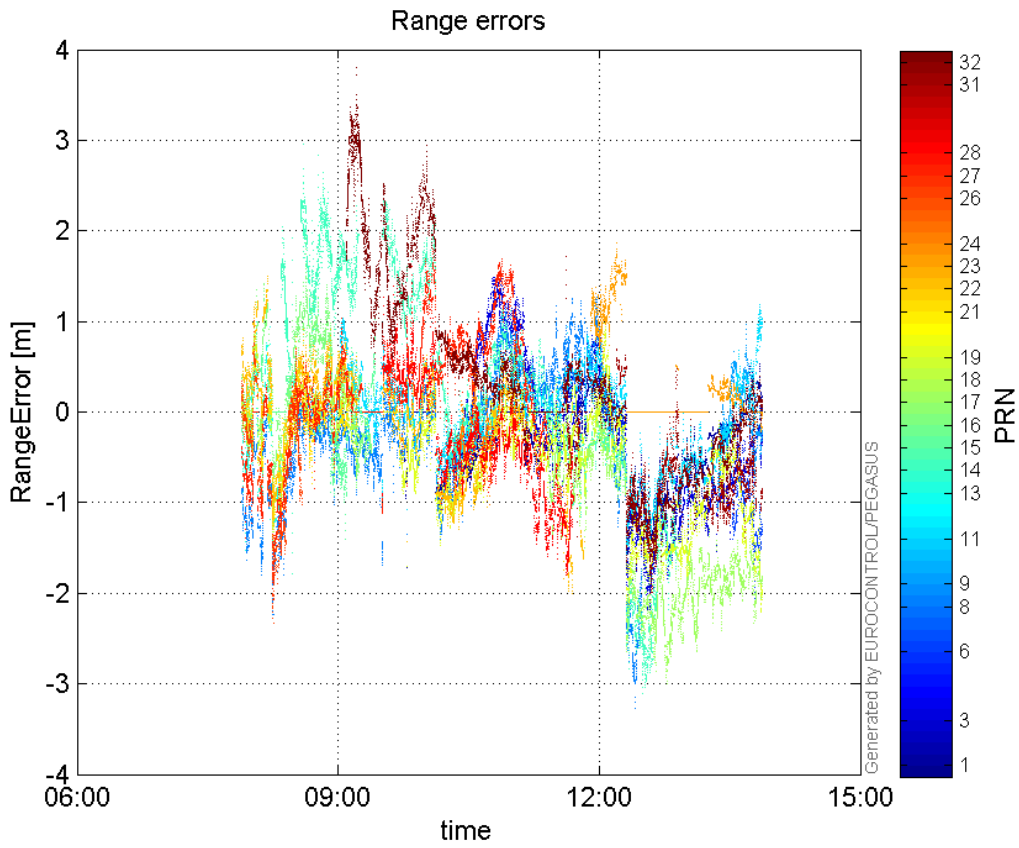
Max Norm Errors :

GPS Week	GPS Second	PRN	Norm Error	Range Error	Sigma
1871	217153	1	1.20834	-1.69585	1.40346
1871	218009	3	1.54134	-2.15249	1.39651
1871	222445	6	0.918596	-2.05733	2.23964
1871	202513	8	1.33485	-2.23326	1.67305
1871	222433	9	0.487861	-1.1374	2.33141
1871	217154	11	1.08468	-1.63187	1.50448
1871	202526	13	0.587311	-1.69544	2.88678
1871	208242	14	0.923888	1.88794	2.04347
1871	205520	15	0.288839	-1.40142	4.85192
1871	203857	16	1.0034	1.92828	1.92174
1871	218789	17	1.72297	-2.9368	1.7045
1871	201737	18	0.58005	0.920725	1.58732
1871	217217	19	1.27304	-2.07389	1.62908
1871	201697	21	0.404919	0.679438	1.67796
1871	202266	22	0.996855	1.47299	1.47764
1871	216716	23	0.783044	1.87149	2.39003
1871	210876	24	0.16346	0.656488	4.0162
1871	202513	26	0.919913	-2.33247	2.53553
1871	202513	27	1.42258	-2.07741	1.46031
1871	214646	28	0.687594	-1.80227	2.62112
1871	218102	31	0.168571	-2.07331	12.2993
1871	208852	32	1.58906	2.93824	1.84904

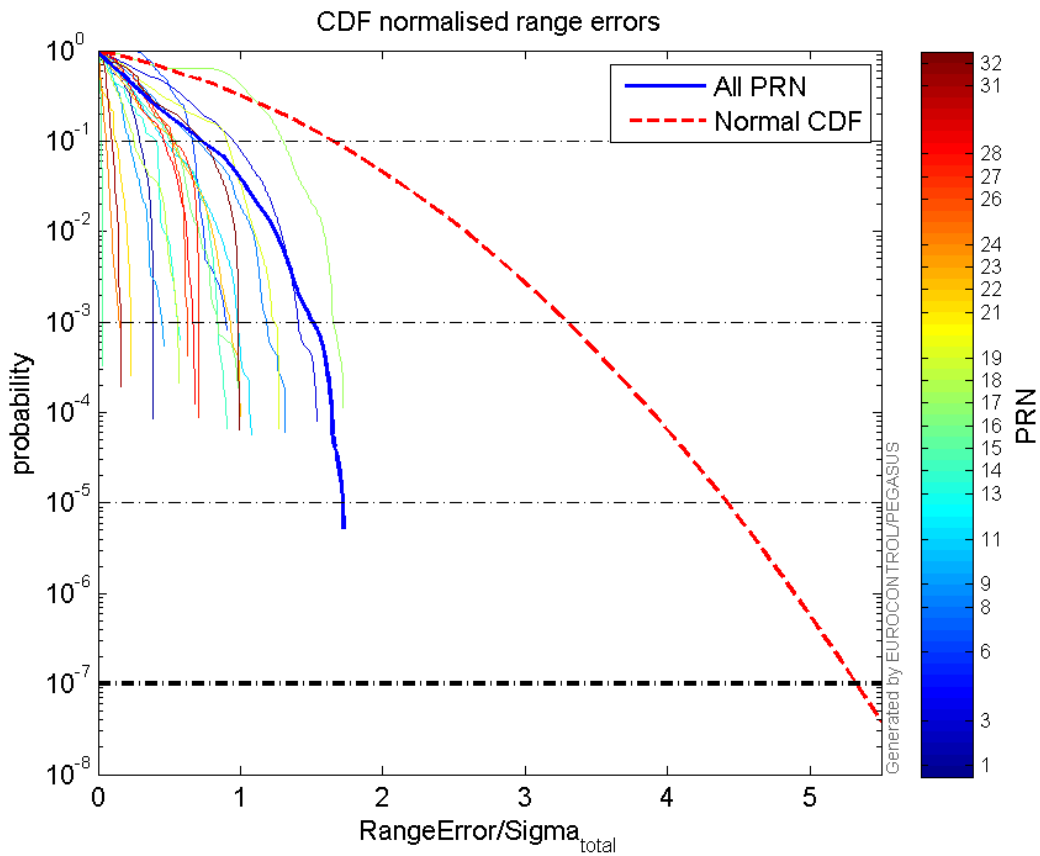
Normalised Range errors (median):



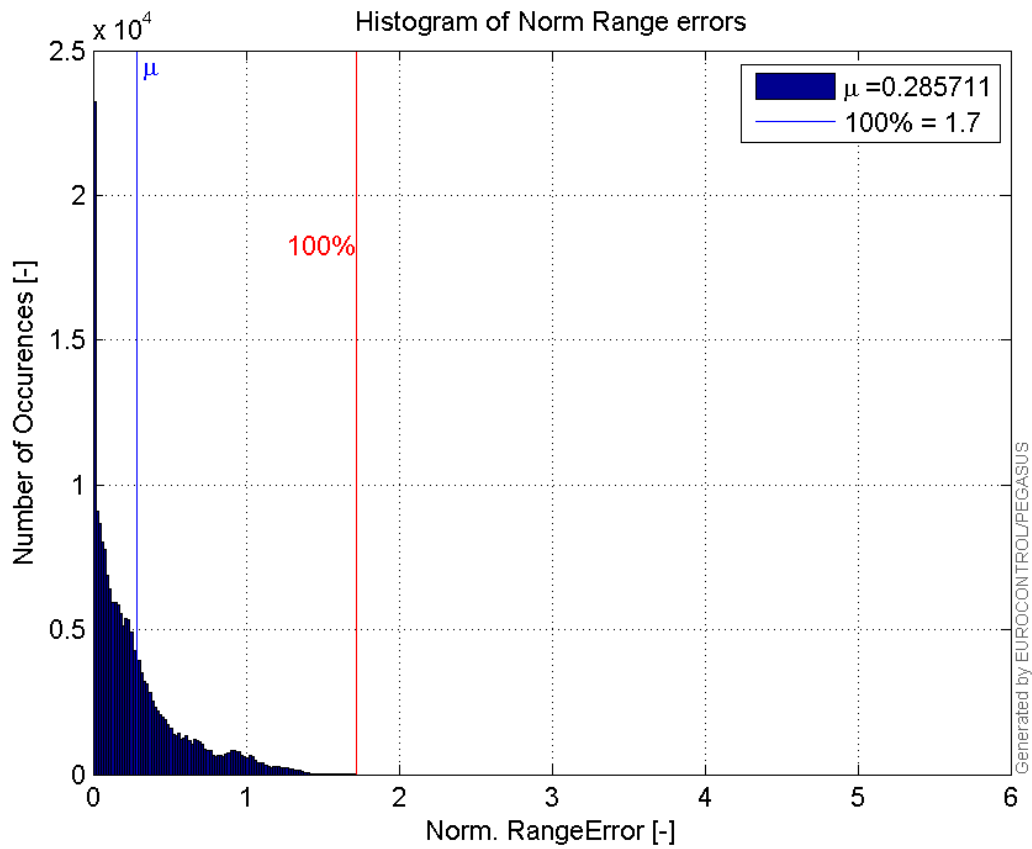
Range errors:



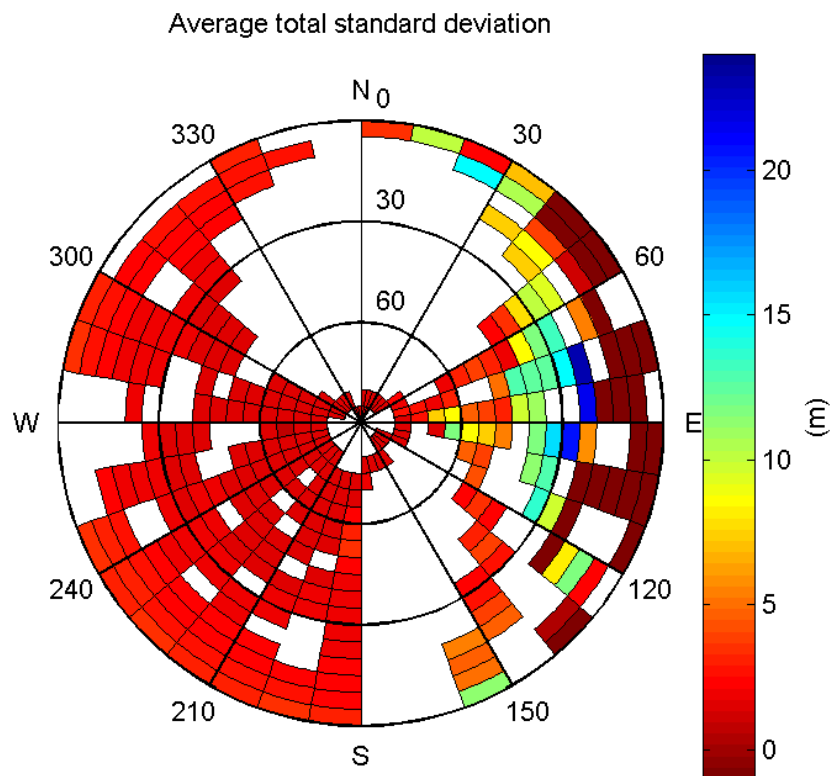
CDF normalised range errors:



Histogram of Norm Range errors:

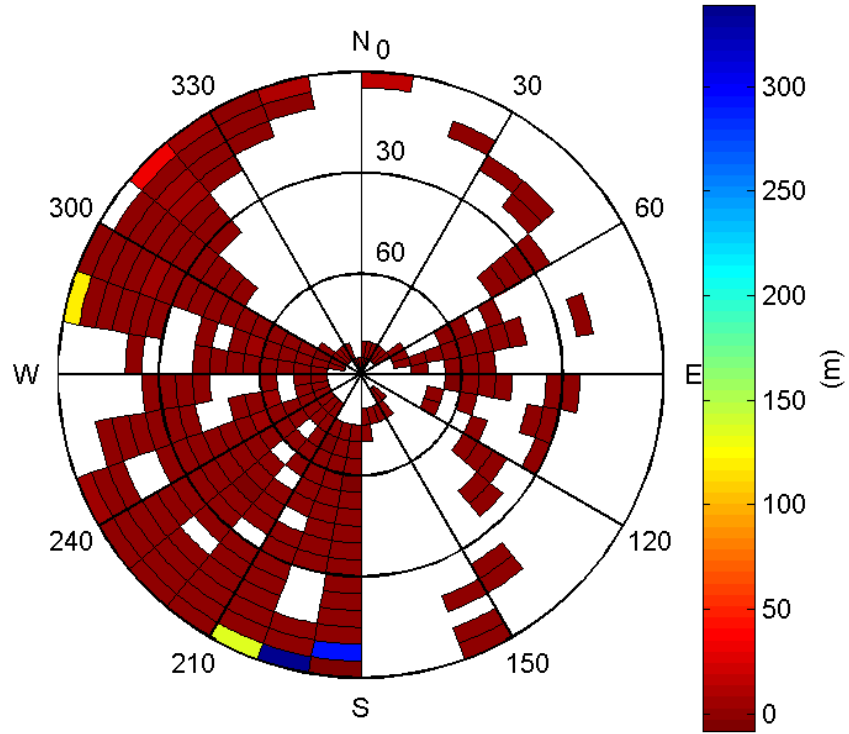


Sigma Sky Plot:



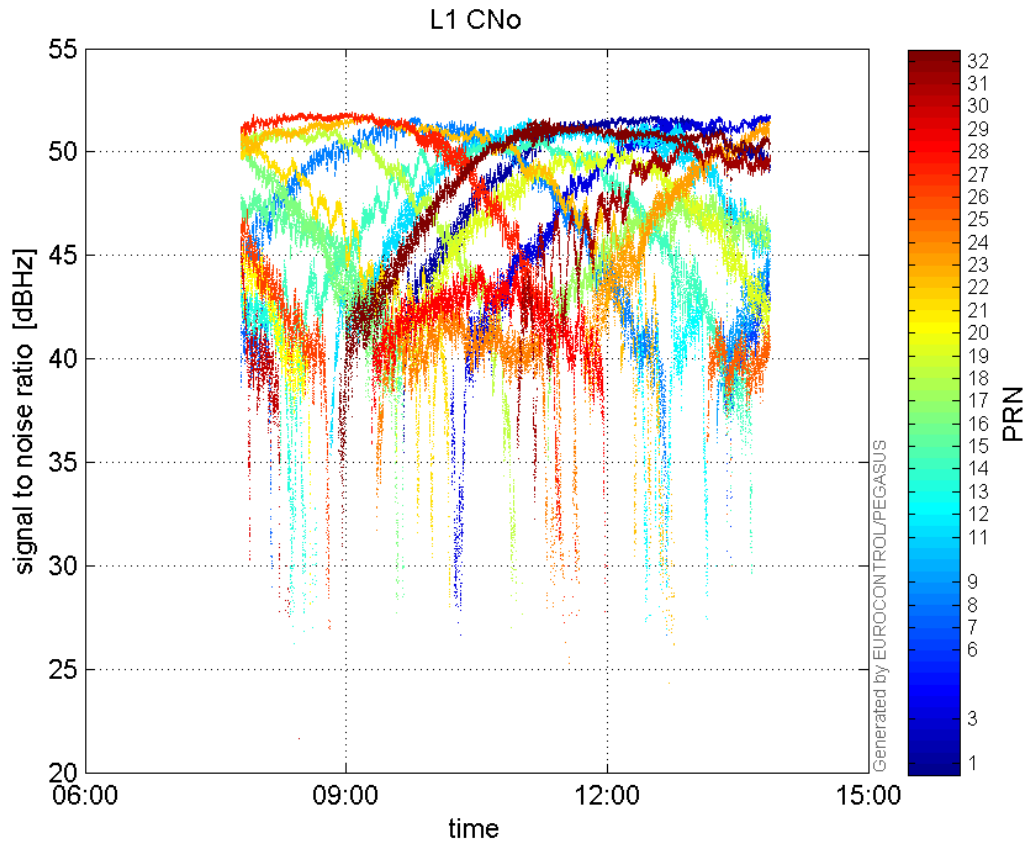
Norm Error Sky Plot:

Maximum Range Error

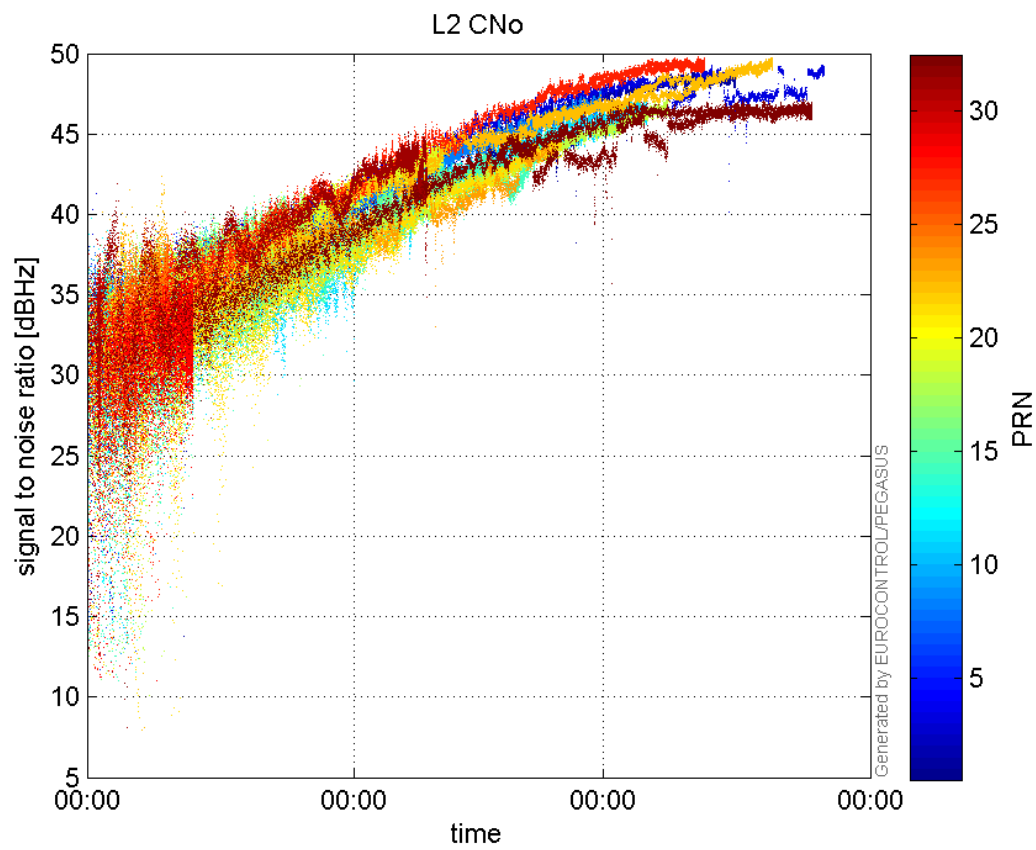


signal quality

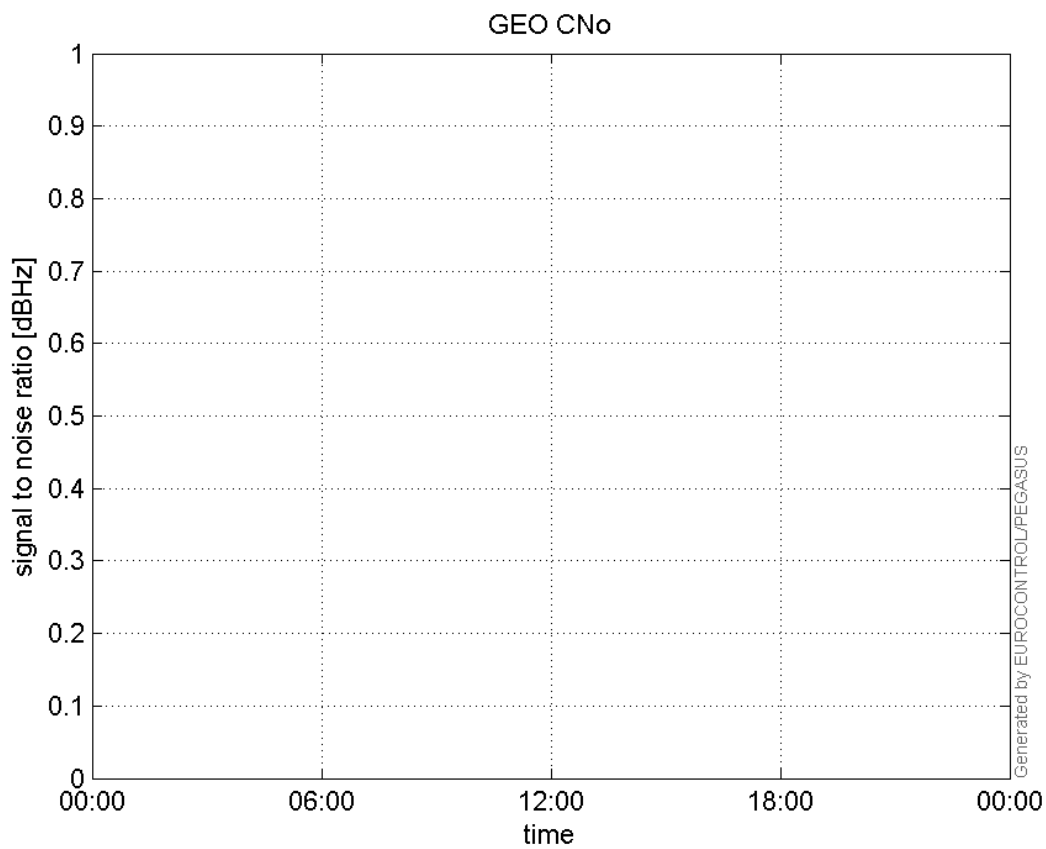
L1 CNo:



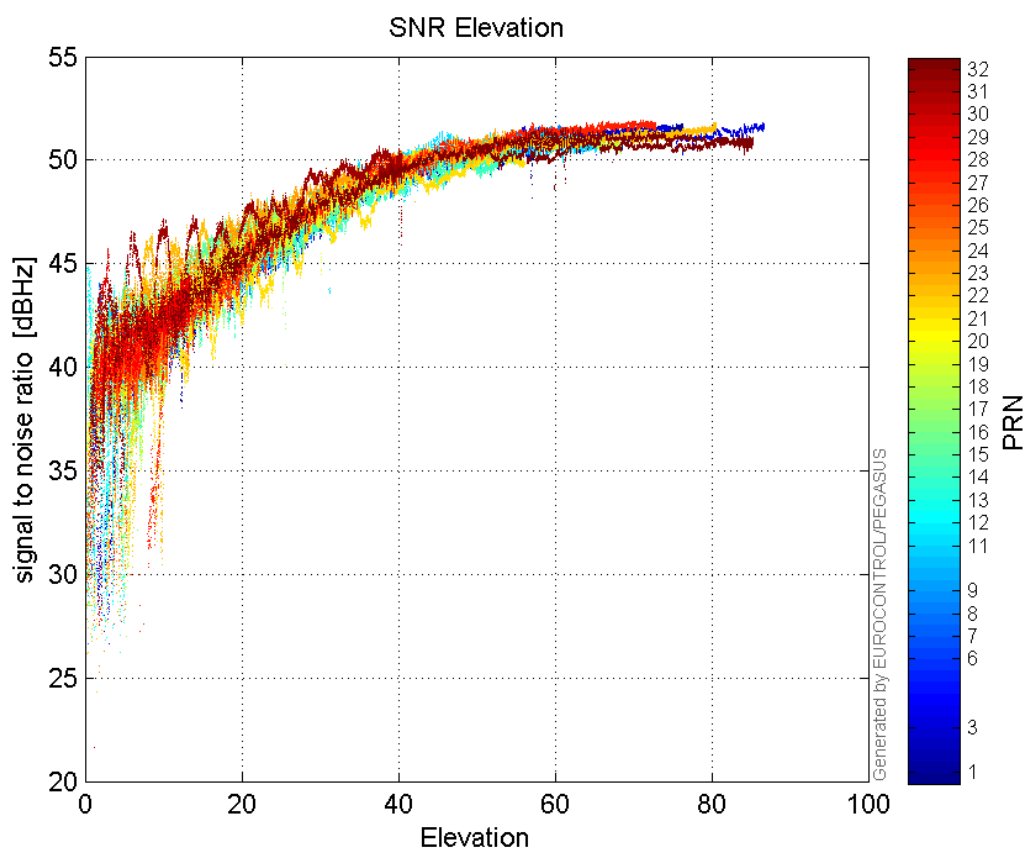
L2 CNo:



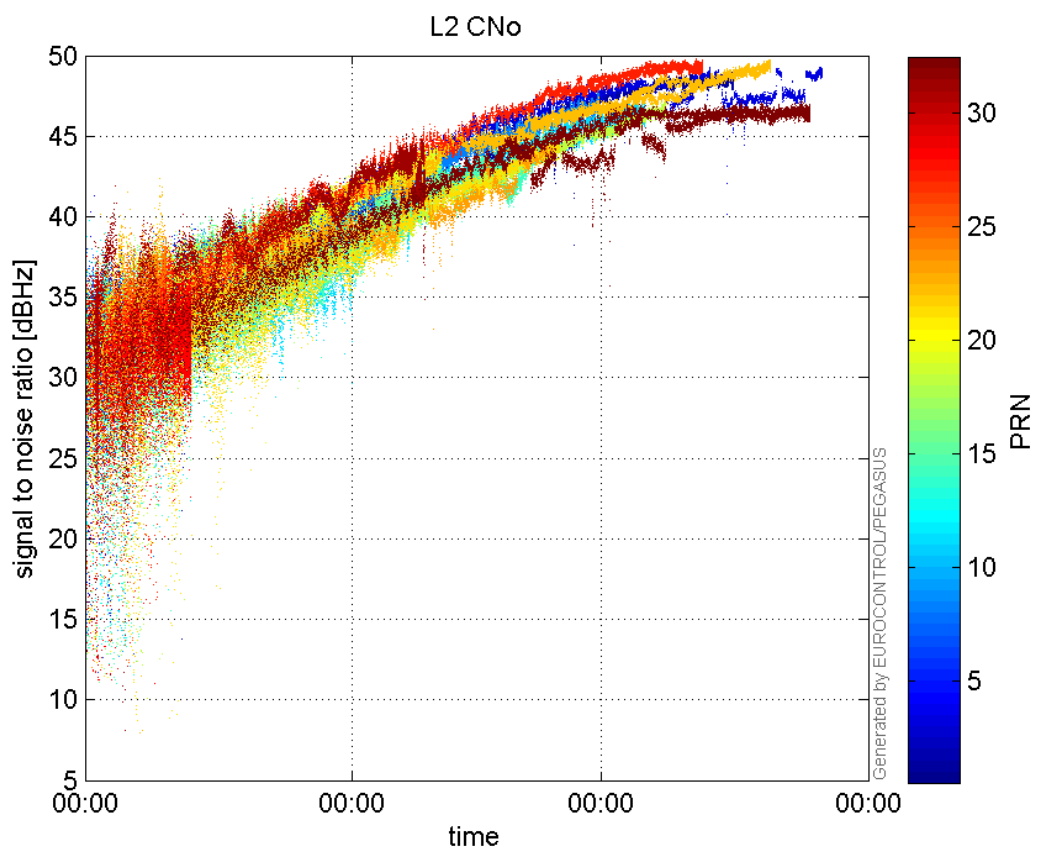
GEO CNo:



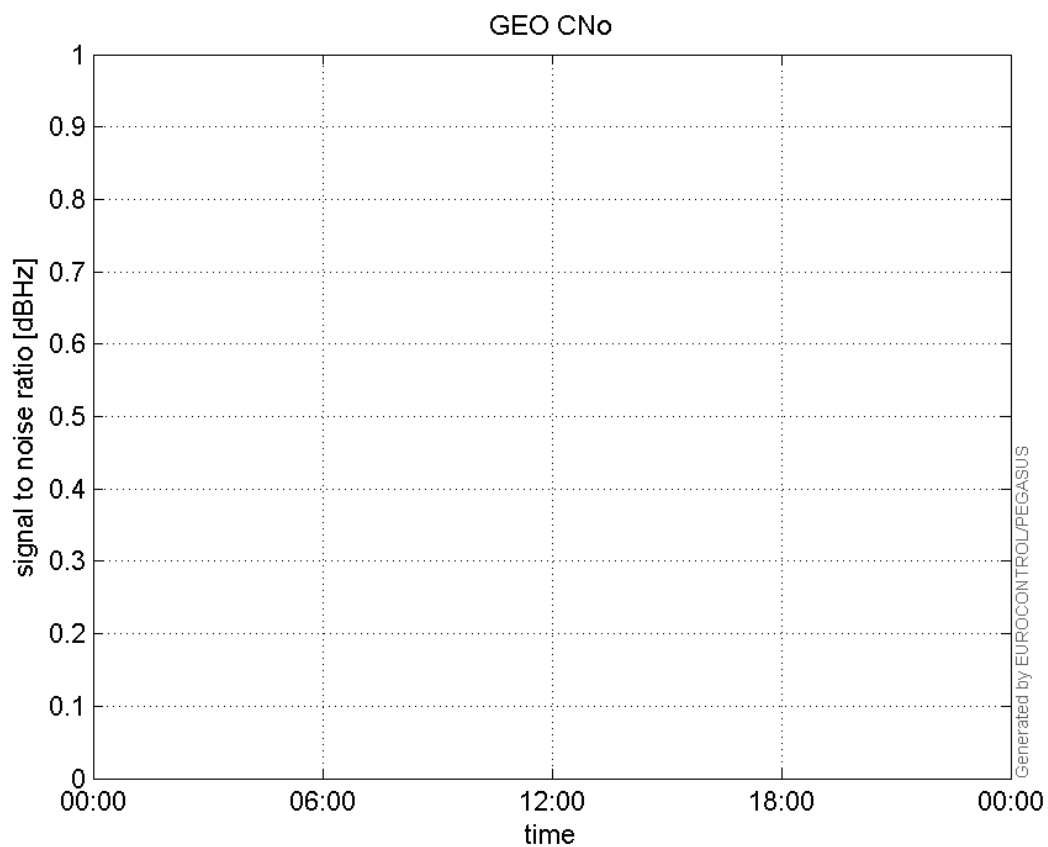
SNR Elevation:



L2 CNo:

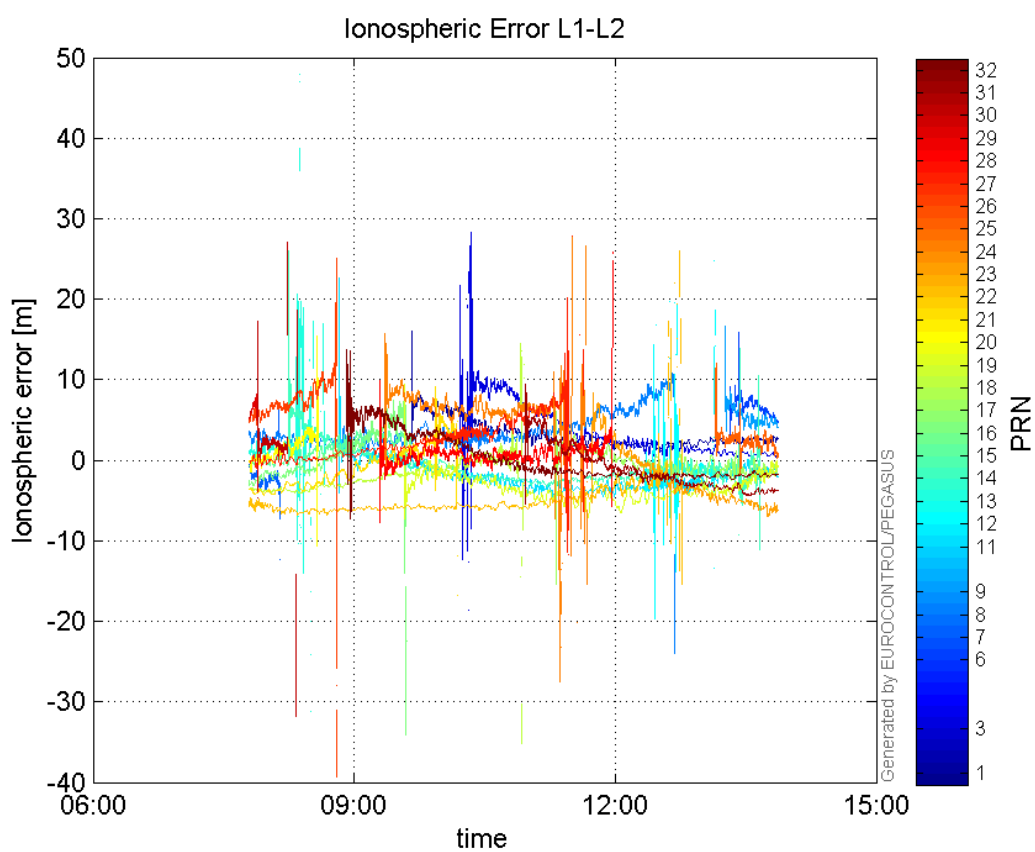


GEO CNo:



dual frequency

Ionospheric Error L1-L2:



Parameters

system

Name	Section	Value
name	system	GNSS_Solution
version	system	4.8.2.1
input_prefix	system	D:/PegasusDateGob/job/2015_11_17EGNOS/02_Convertor/02_Convertor
output_prefix	system	D:/PegasusDateGob/job/2015_11_17EGNOS/03_GNSS_Solution/03_GNSS_Solution_sol

settings

Name	Section	Value
ref_lat	settings	50.439
ref_lon	settings	30.4297
ref_alt	settings	215.271
smoothing	settings	yes
smoothing_constant	settings	100
smoothing_max_gap	settings	10
smoothing_max_divergence	settings	3
min_elevation	settings	5
aad_model	settings	a
output_range_file	settings	yes
sbas_prn	settings	120
gnss_mode	settings	sbas

results

Name	Section	Value
init_lat	results	50.4391
init_lon	results	30.4297
init_alt	results	240.6517
mi_numbers	results	0

Position Domain

start: 07:47:28 17.11.2015 (week: 1871 sec: 200848)
end: 13:52:06 17.11.2015 (week: 1871 sec: 222726)
duration: 06:04:39 ..

quality

valid samples 21516
total samples 21879

Event tables

Position discontinuity events type no (0)
APV-I discontinuity events type all
APV-35m discontinuity events type all
LPV-200 discontinuity events type all
CAT-I discontinuity events type nothing

extremes :

	Epoch	HPE	HPL	HPE/HPL	VPE	VPL	VPE/VPL
max normHor	208829	1.91797	10.0773	0.190326	2.2935	19.174	0.119615
max normVer	208852	2.27937	14.284	0.159575	4.14669	20.7073	0.200253
max HPE	206144	9.55762	108.135	0.088386	-4.82367	61.3431	0.0786343
max VPE	206144	9.55762	108.135	0.088386	-4.82367	61.3431	0.0786343
min HPL	201875	0.915812	8.691	0.105375	-0.453702	17.1531	0.0264502
min VPL	215663	0.817585	11.1868	0.0730848	-0.324715	12.5414	0.0258915

APV-I discontinuity events :

#	Epoch	duration	stable period
1	206143	420	4932
2	206724	312	161

APV-35m discontinuity events :

#	Epoch	duration	stable period
1	206143	420	4932
2	206724	312	161
3	219759	1092	12723
4	220852	3	1
5	220856	3	1
6	220860	3	1
7	220864	3	1
8	220868	3	1
9	220872	3	1
10	220876	3	1
11	220880	3	1
12	220884	3	1
13	220888	3	1
14	220892	2	1
15	220896	2	2
16	220900	2	2

LPV-200 discontinuity events :

#	Epoch	duration	stable period
1	206143	420	4932
2	206724	312	161
3	219759	1092	12723
4	220852	3	1
5	220856	3	1
6	220860	3	1
7	220864	3	1
8	220868	3	1
9	220872	3	1
10	220876	3	1
11	220880	3	1

12	220884	3	1
13	220888	3	1
14	220892	2	1
15	220896	2	2
16	220900	2	2

First Glance analysis

Duration	21879
Number of Samples	21879
Number of invalid sample	363
Number of no position solution samples	0
Number of missing sample	0
Logging Loss	0
Processing Loss	1.6591
Number of Misleading Information	0
Data gaps	0
Discontinuities	0

Number of Samples :

Valid	APV-1	LPV-200	CAT-1	APV-35m
21516	20784	19656	0	19656

Accuracy statistics :

	Valid	APV-1	LPV-200	CAT-1	APV-35m
HPE 95%	2.54952	2.38531	1.7889	NaN	1.7889
HPEscale 95%	NaN	5.62815	5.72651	NaN	5.72651
VPE 95%	2.95527	2.9224	2.74087	NaN	2.74087
VPEscale 95%	NaN	6.30913	4.47964	NaN	4.47964

Availability :

	Valid	APV-1	LPV-200	CAT-1	APV-35m
Signal in Space	1	0.965979	0.913553	0	0.913553
measurements	0.983409	0.949952	0.898396	0	0.898396
Operational	0.983409	0.949952	0.898396	0	0.898396

Discontinuity events :

	Valid	APV-1	LPV-200	CAT-1	APV-35m
All	--	2	16	--	16
Long	--	2	3	--	3
Independent	--	2	3	--	3
P(disc.)	NaN	0.00144342	0.00228938	NaN	0.00228938
P(slide)	NaN	0.00144342	0.0030525	NaN	0.0030525

Integrity events :

	MI	HMI APV-1	HMI LPV-200	HMI CAT-1	HMI APV-35m
Total	0	0	0	0	0

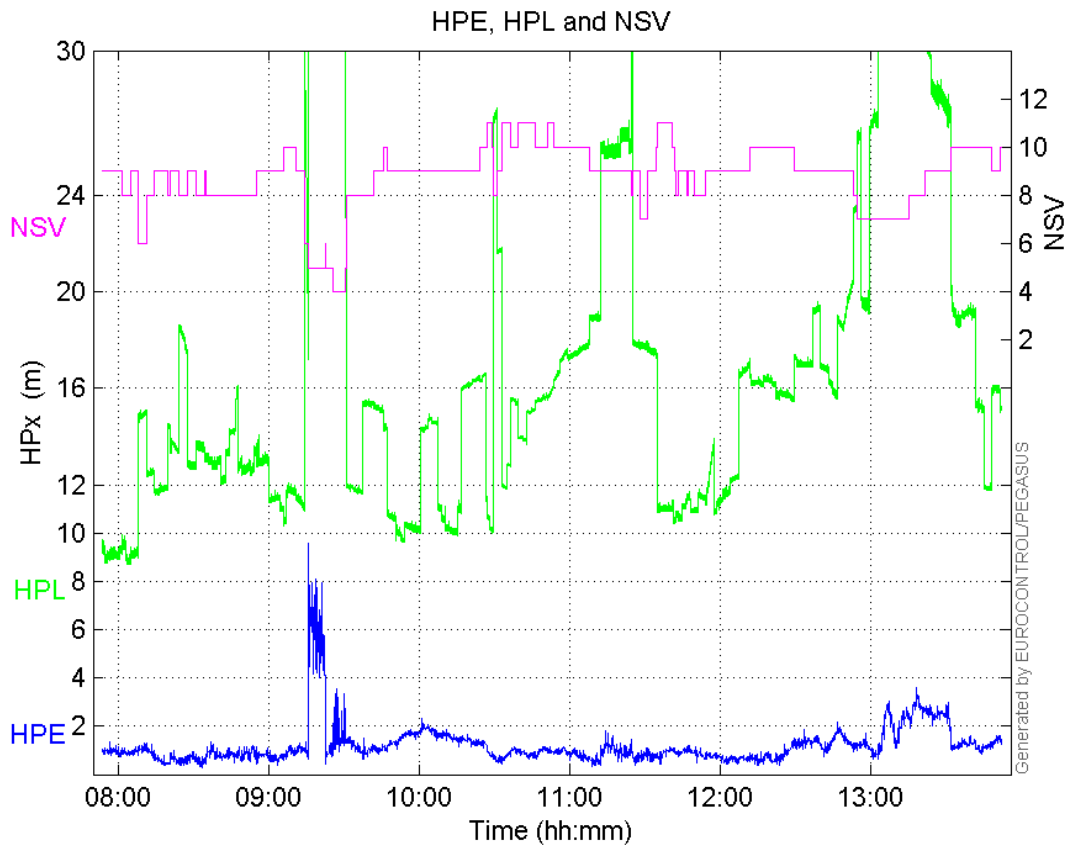
Horizontal	0	0	0	0	0
Vertical	0	0	0	0	0

Performance Summary :

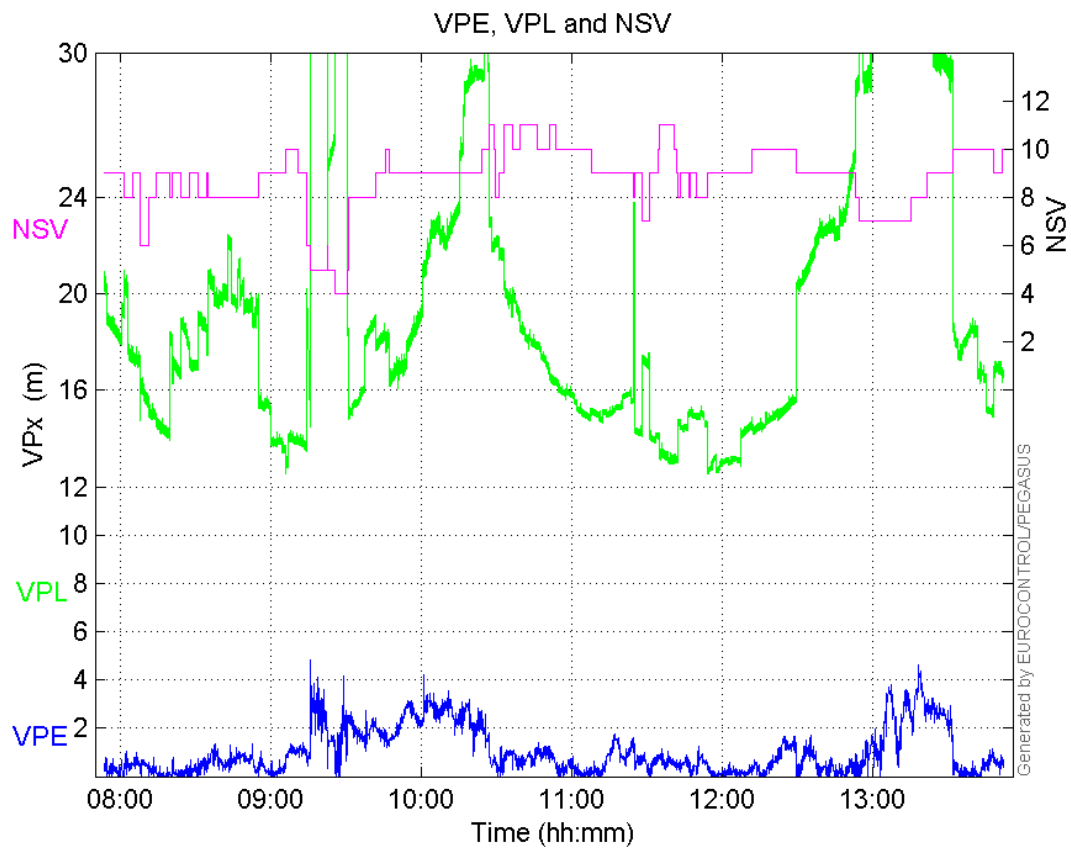
	Valid	APV-1	LPV-200	CAT-1	APV-35m
Samples	21516	20784	19656	0	19656
SIS Availability	1	0.965979	0.913553	0	0.913553
Local Availability	0.983409	0.949952	0.898396	0	0.898396
Operational Availability	0.983409	0.949952	0.898396	0	0.898396
HPE 95%	2.54952	2.38531	1.7889	NaN	1.7889
HPEscale 95%	NaN	5.62815	5.72651	NaN	5.72651
VPE 95%	2.95527	2.9224	2.74087	NaN	2.74087
VPEscale 95%	NaN	6.30913	4.47964	NaN	4.47964
All Discontinuity Events	--	2	16	--	16
Long Discontinuity Events	--	2	3	--	3
Independent Discontinuity Events	--	2	3	--	3
P(discontinuity)	NaN	0.00144342	0.00228938	NaN	0.00228938
P(sliding window)	NaN	0.00144342	0.0030525	NaN	0.0030525
All Integrity Events	0	0	0	0	0
Horizontal Integrity Events	0	0	0	0	0
Vertical Integrity Events	0	0	0	0	0

Time Series

HPE, HPL and NSV:

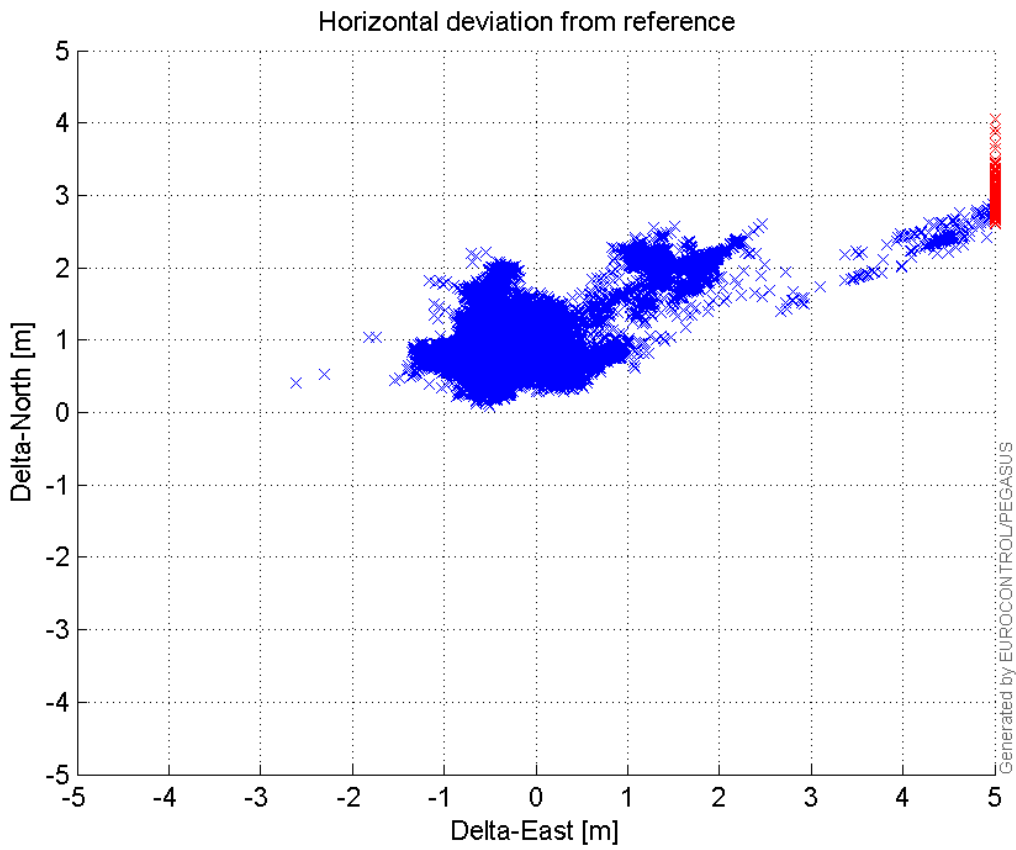


VPE, VPL and NSV:



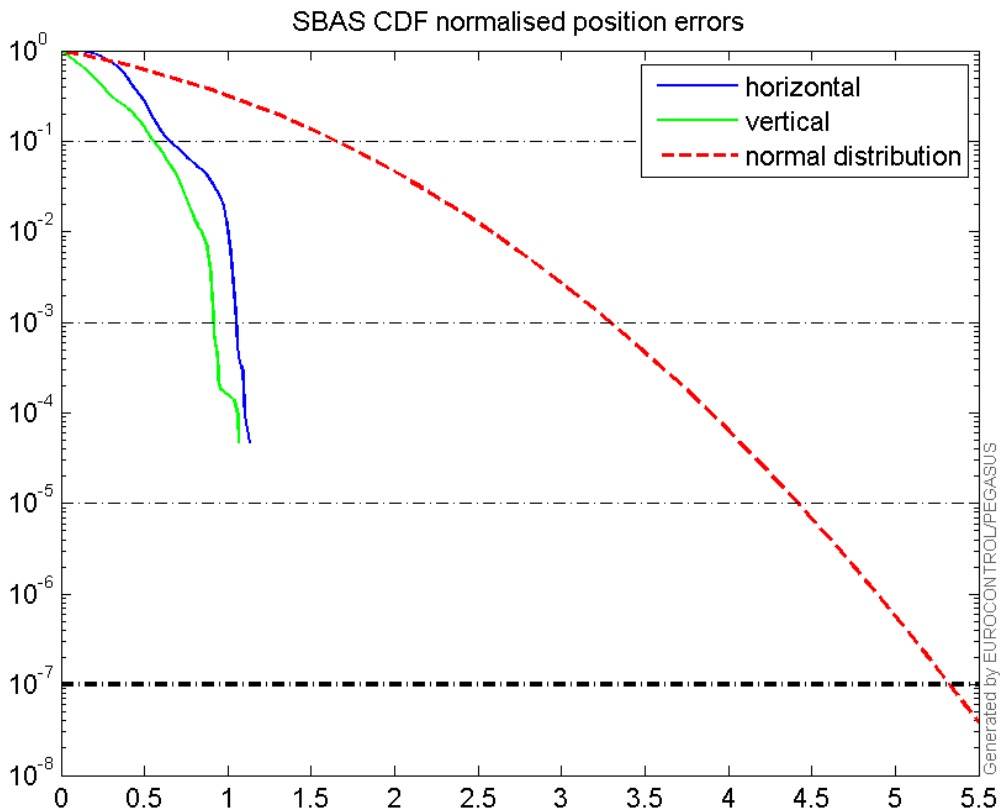
Horizontal deviation

Horizontal deviation from reference :



CDF position

SBAS CDF position domain:



Statistics

number	20784
sum	23156.53
sum2	31137.711
prctile95	2.385315
prctile99	2.8239406
number	20784
sum	20551.276
sum2	38218.854
prctile95	2.9223978
prctile99	3.5019538
number	20784
sum	346520.11
sum2	6690721
prctile95	32.50514
prctile99	36.56606
number	20784
sum	408264.06
sum2	8901195.6
prctile95	35.67215
prctile99	40.617024
number	20784
sum	1486.405
sum2	126.06583
prctile95	0.14070363
prctile99	0.16696811
number	20784
sum	987.66231
sum2	78.212514
prctile95	0.12618261
prctile99	0.15858194
number	19656
sum	20634.807
sum2	25059.268
prctile95	1.788904
prctile99	2.56461
number	19656
sum	17538.175
sum2	29219.175
prctile95	2.7408729
prctile99	3.0712727
number	19656
sum	307294.72
sum2	5321979.8
prctile95	27.045
prctile99	33.93948
number	19656
sum	364523.31
sum2	7200860.1
prctile95	29.31104
prctile99	32.606136

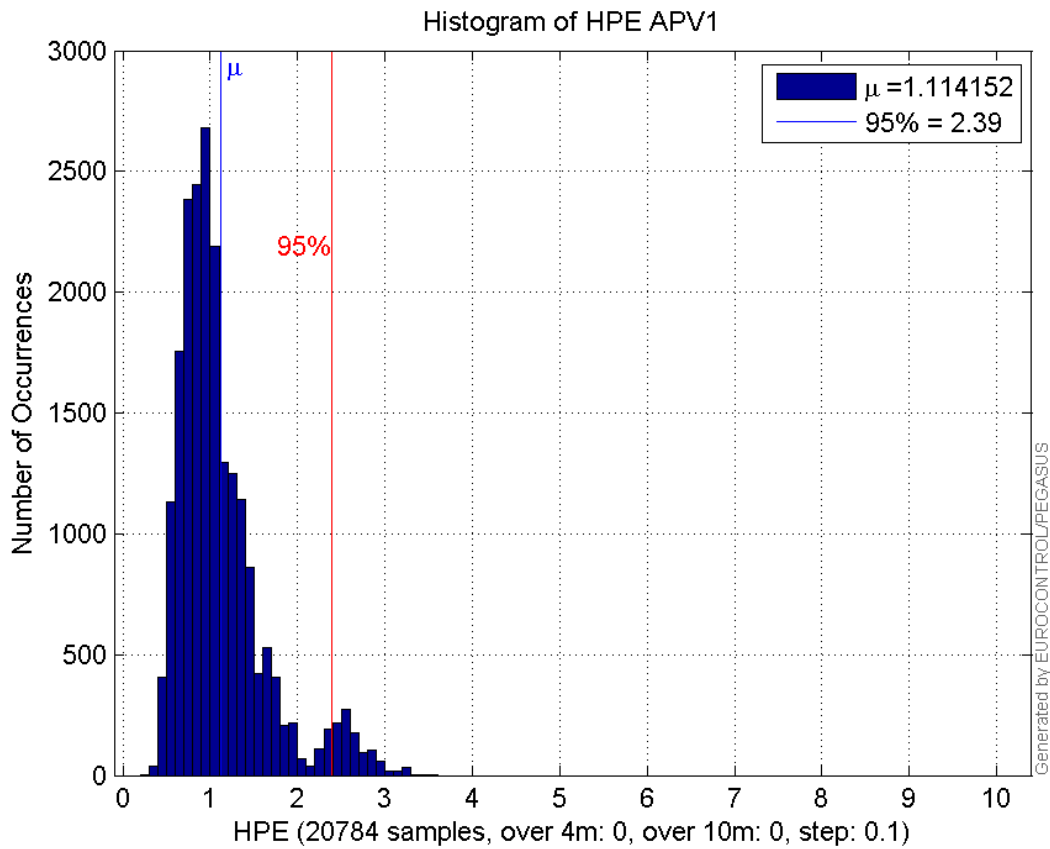
```

number 19656
sum 1412.8615
sum2 120.78736
prctile95 0.14316276
prctile99 0.16721514
number 19656
sum 909.14106
sum2 72.013281
prctile95 0.12798966
prctile99 0.15995233
    
```

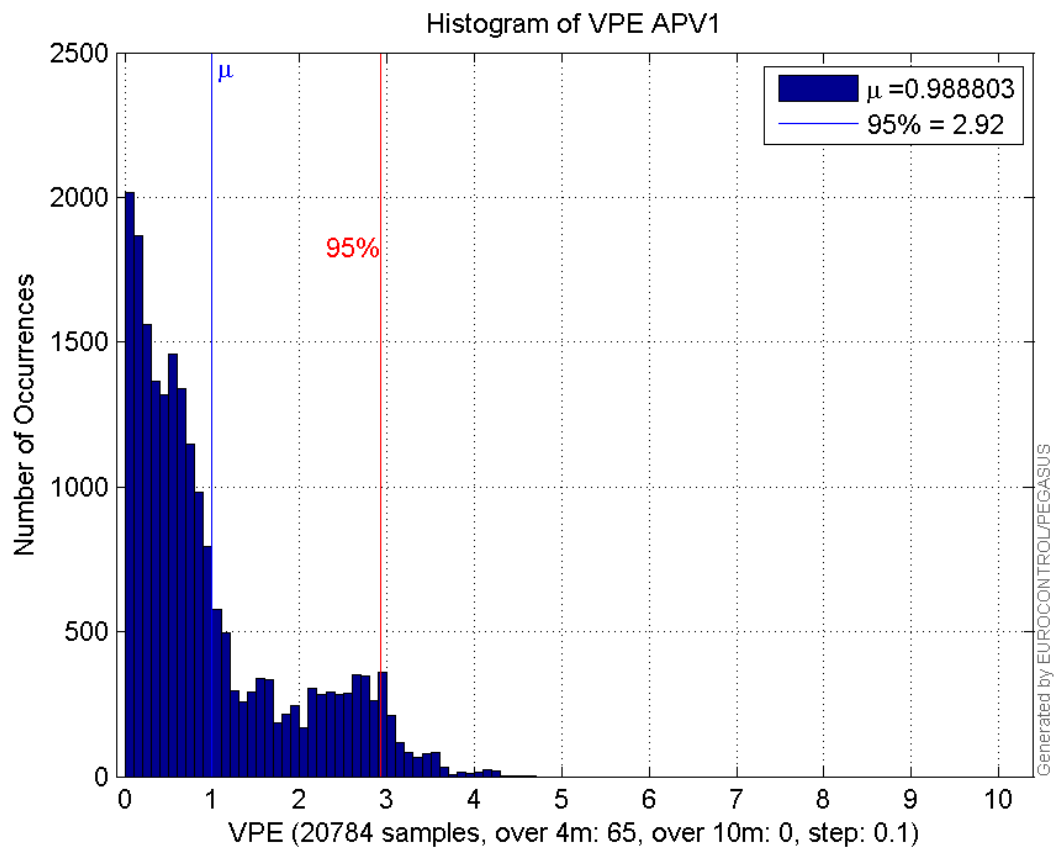
Error and XPL Statistics :

	Mean Value	Standard Deviation	50% Value	95% Value	99% Value	RMS Value
HPE	1.11415	0.50679	0.981987	2.38531	2.82394	1.22399
HPL	16.6724	6.62937	15.4054	32.5051	36.5661	17.942
VPE	0.988803	0.927992	0.662656	2.9224	3.50195	1.35605
VPL	19.6432	6.51296	17.7723	35.6722	40.617	20.6947

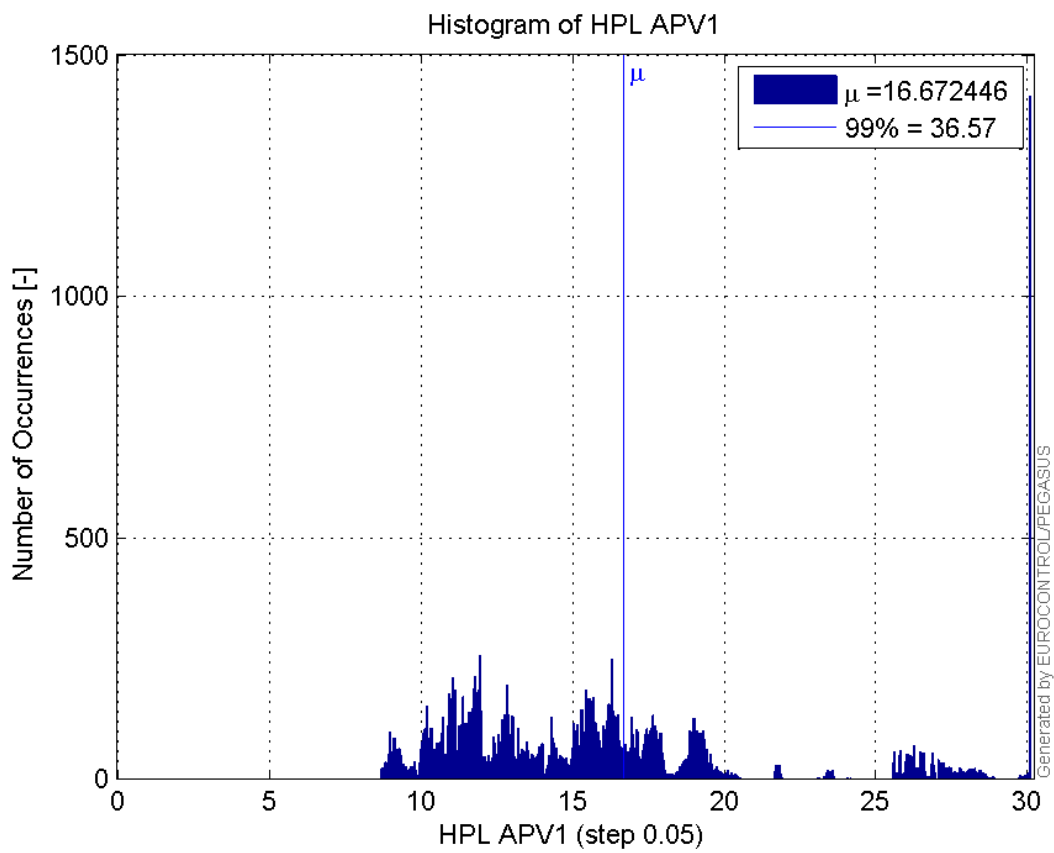
Histogram of HPE APV1:



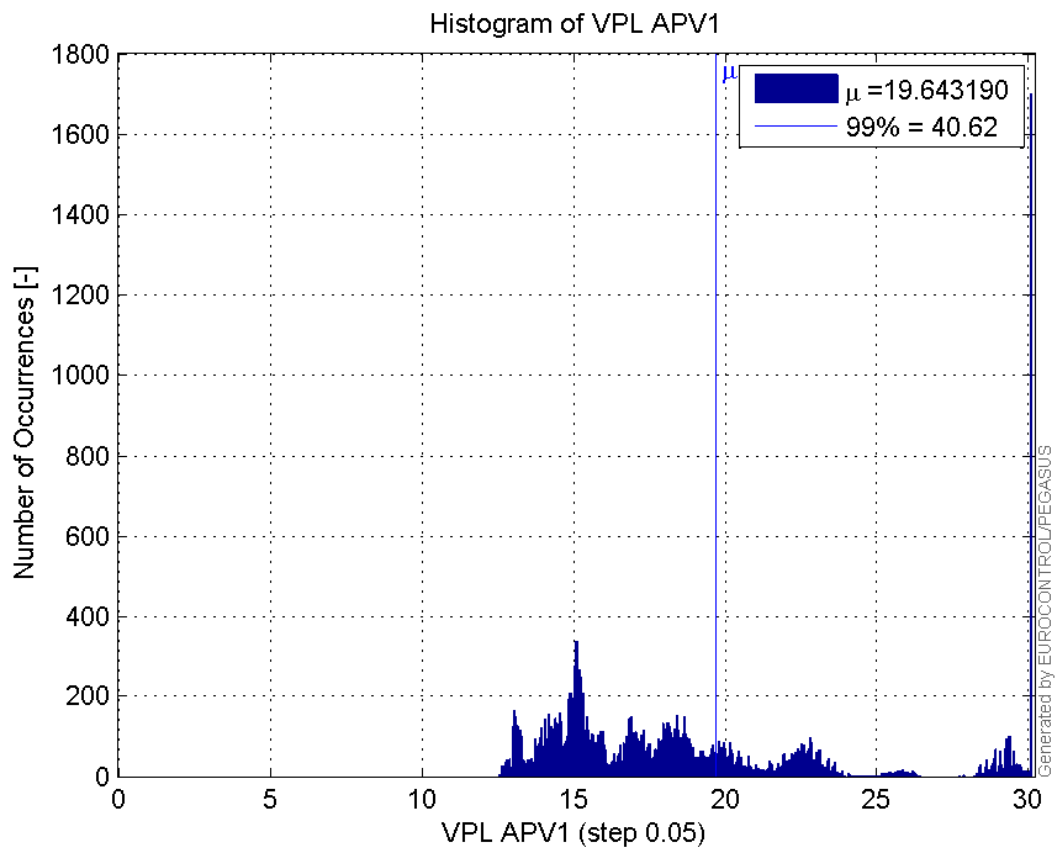
Histogram of VPE APV1:



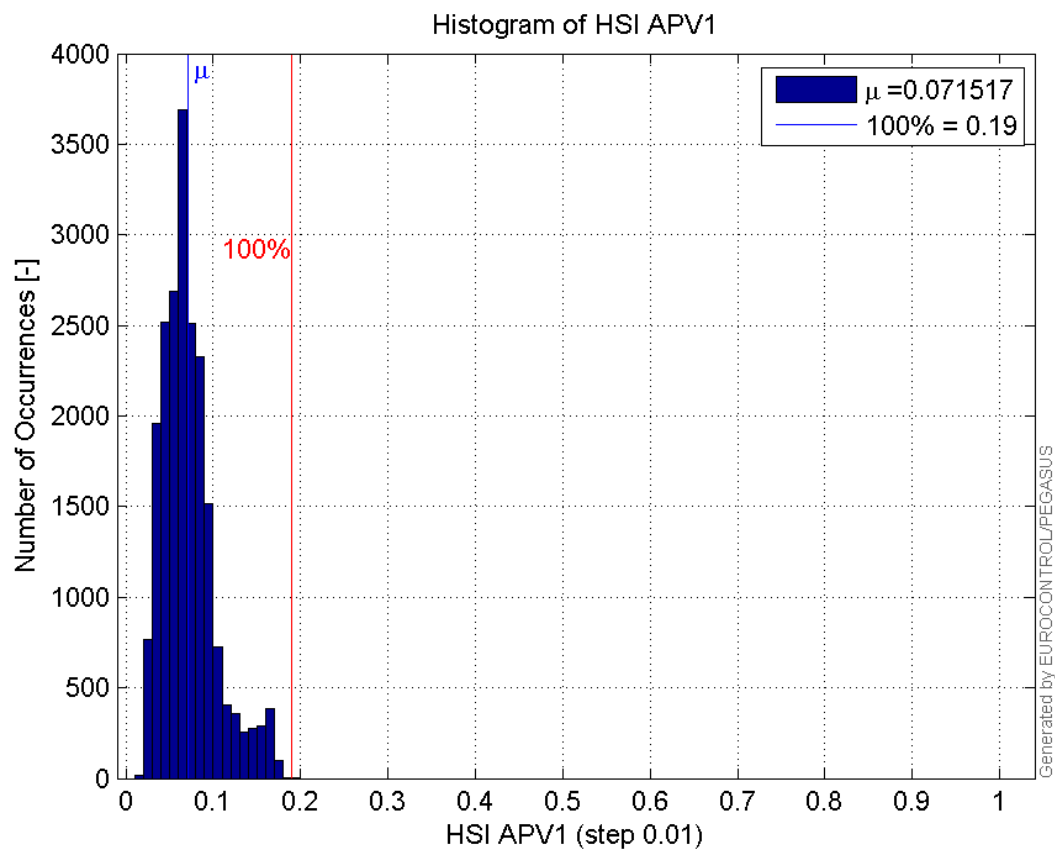
Histogram of HPL APV1:



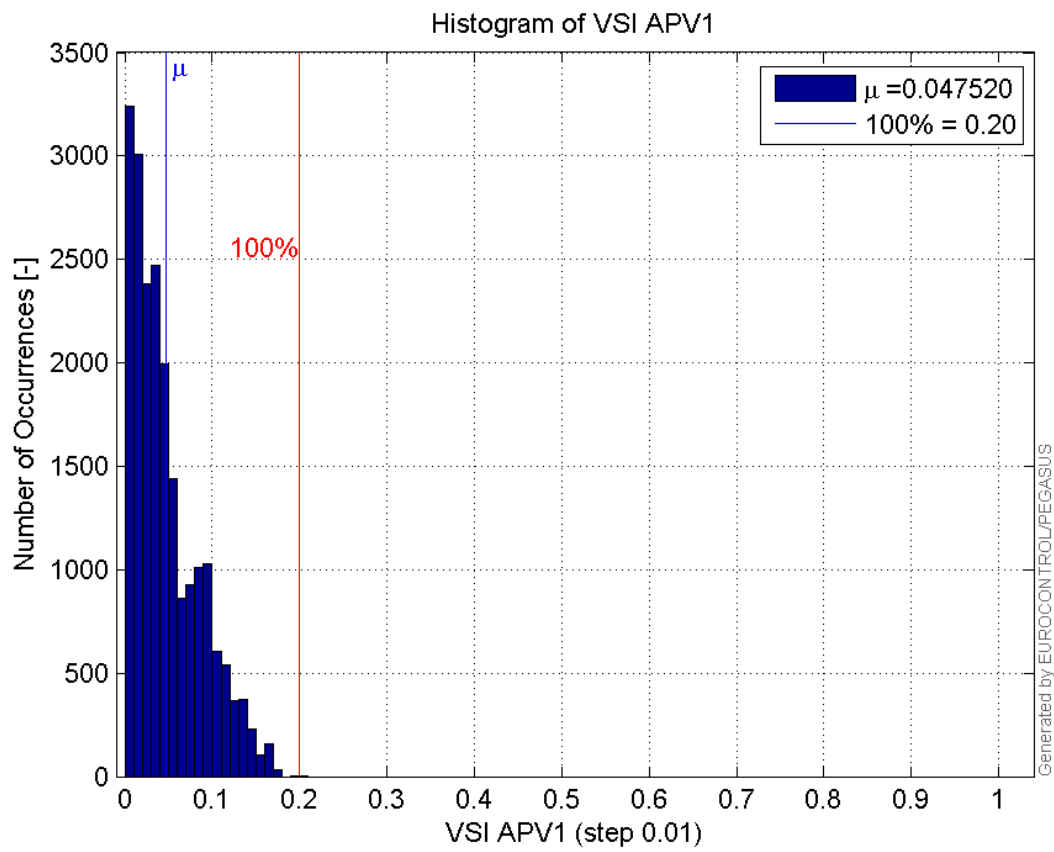
Histogram of VPL APV1:



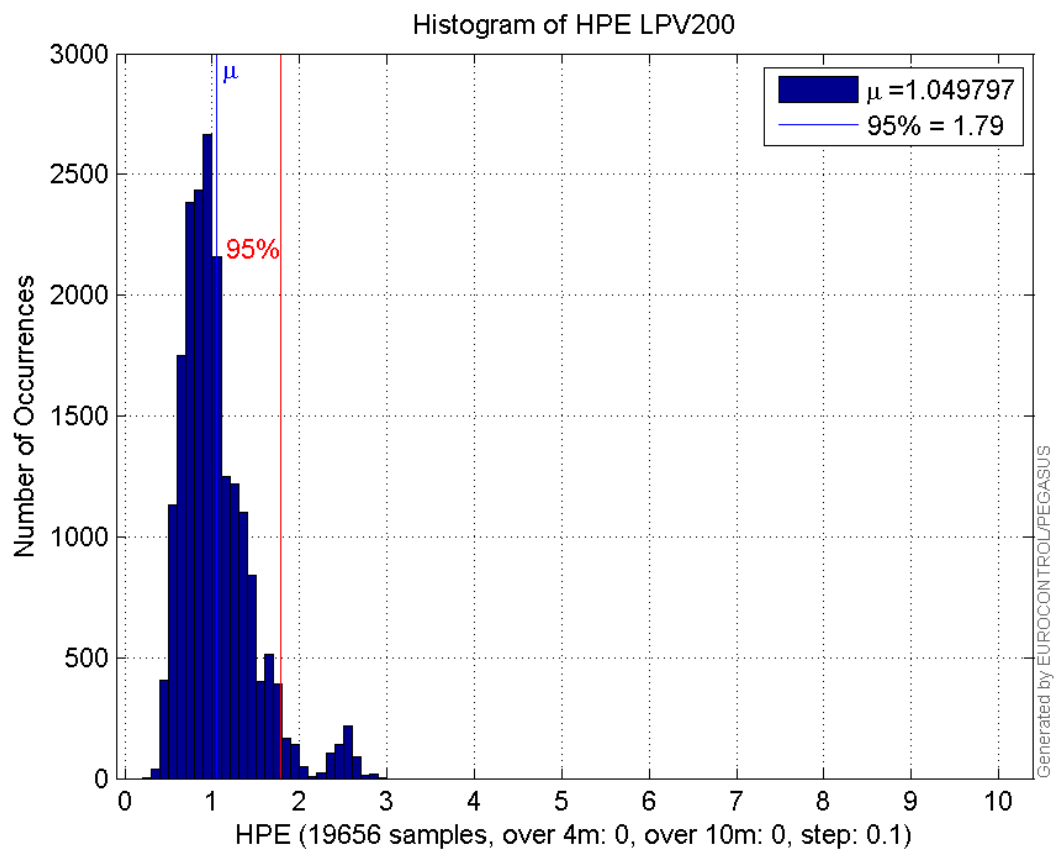
Histogram of HSI APV1:



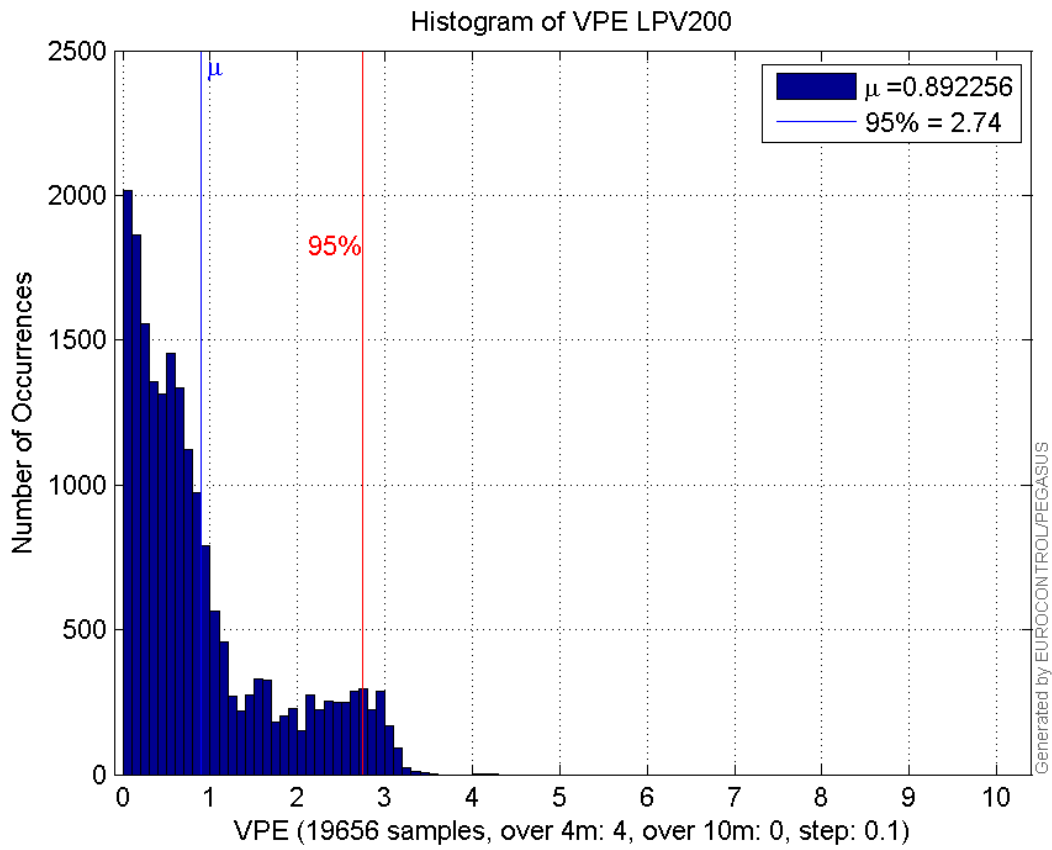
Histogram of VSI APV1:



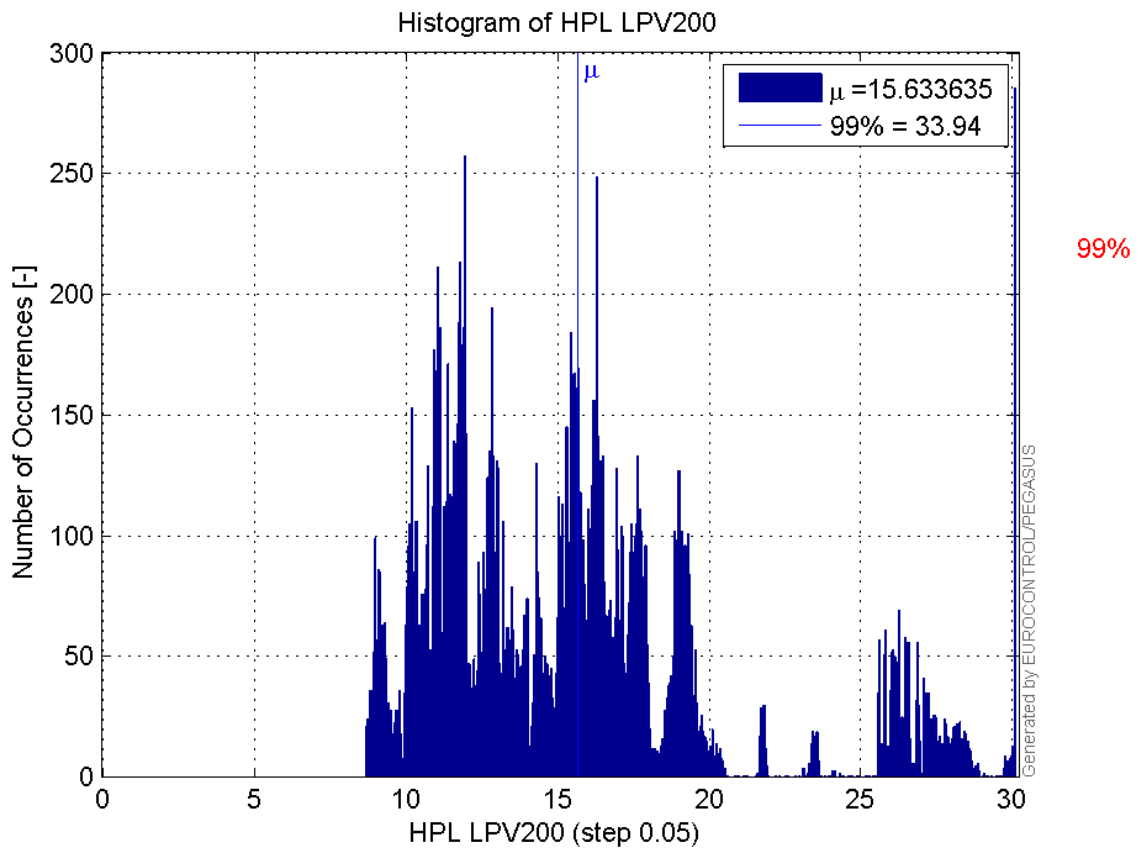
Histogram of HPE LPV200:



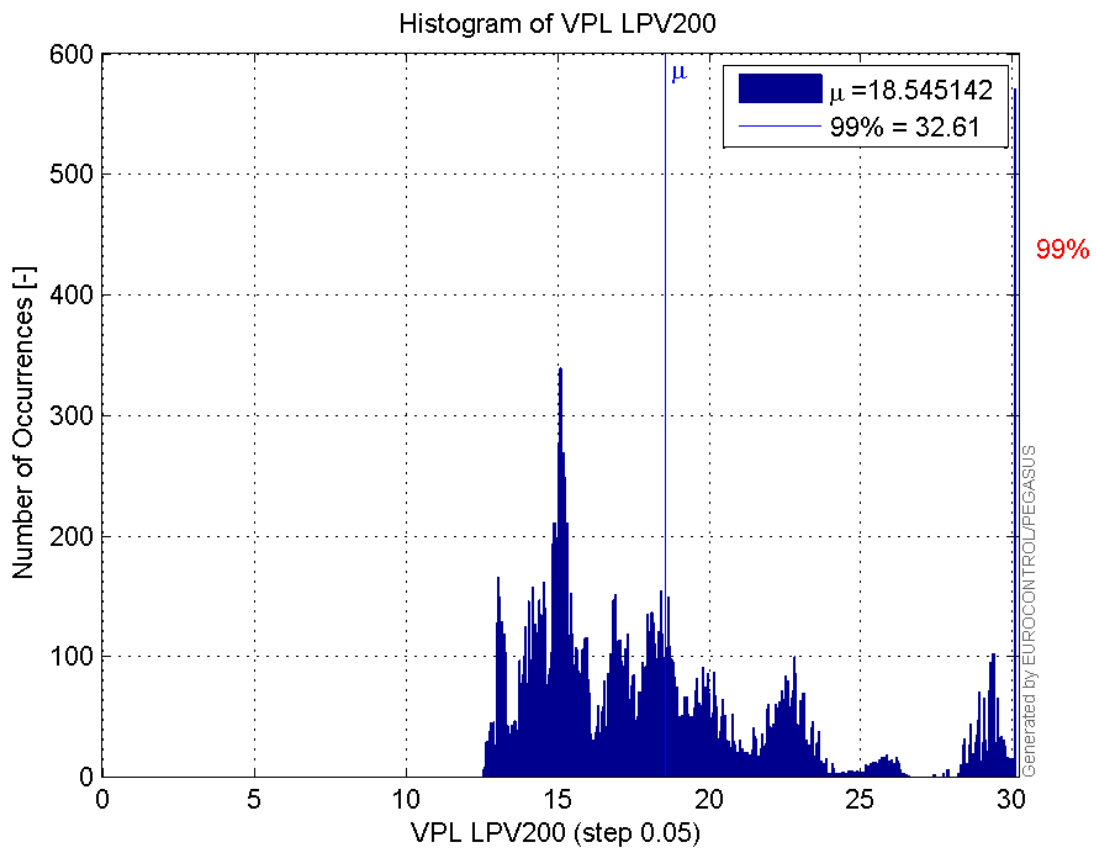
Histogram of VPE LPV200:



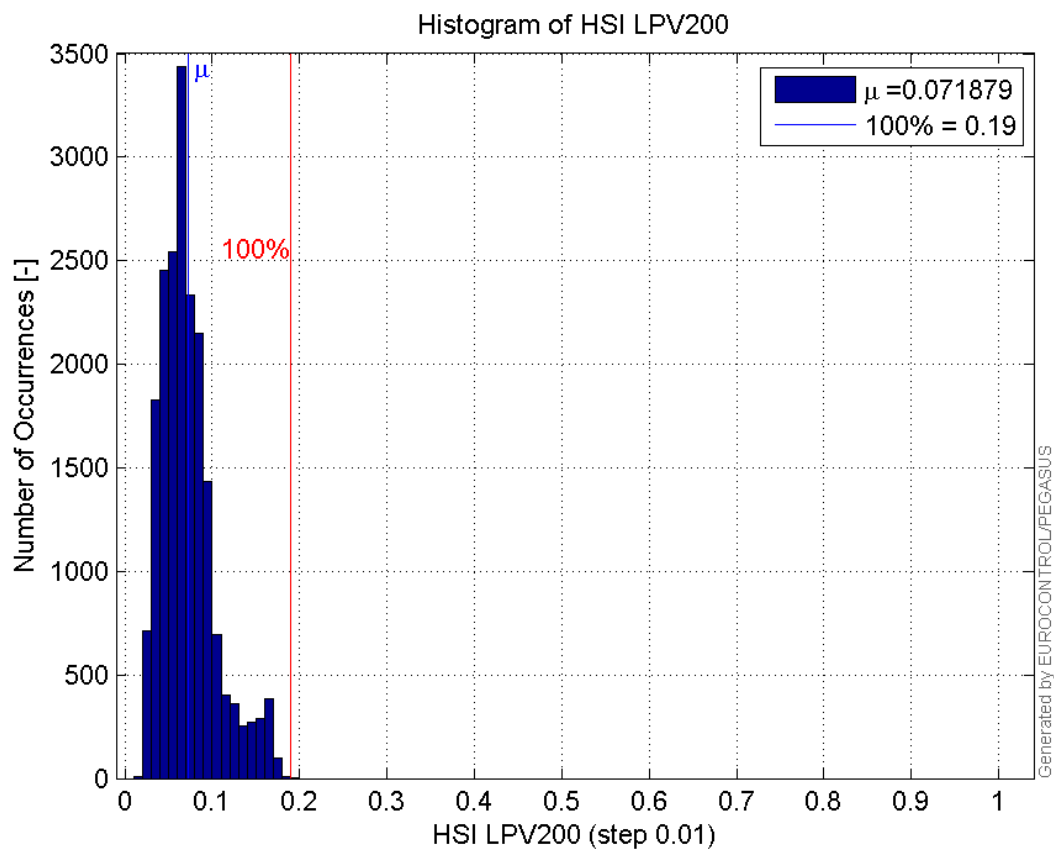
Histogram of HPL LPV200:



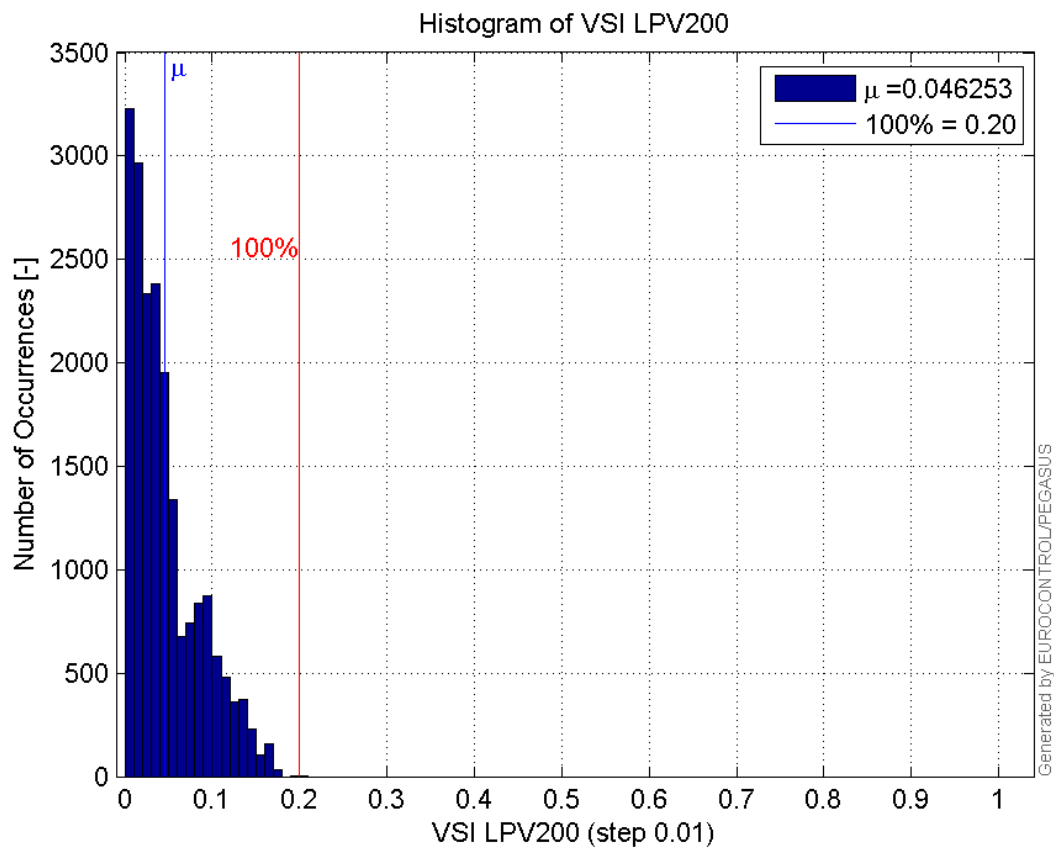
Histogram of VPL LPV200:



Histogram of HSI LPV200:

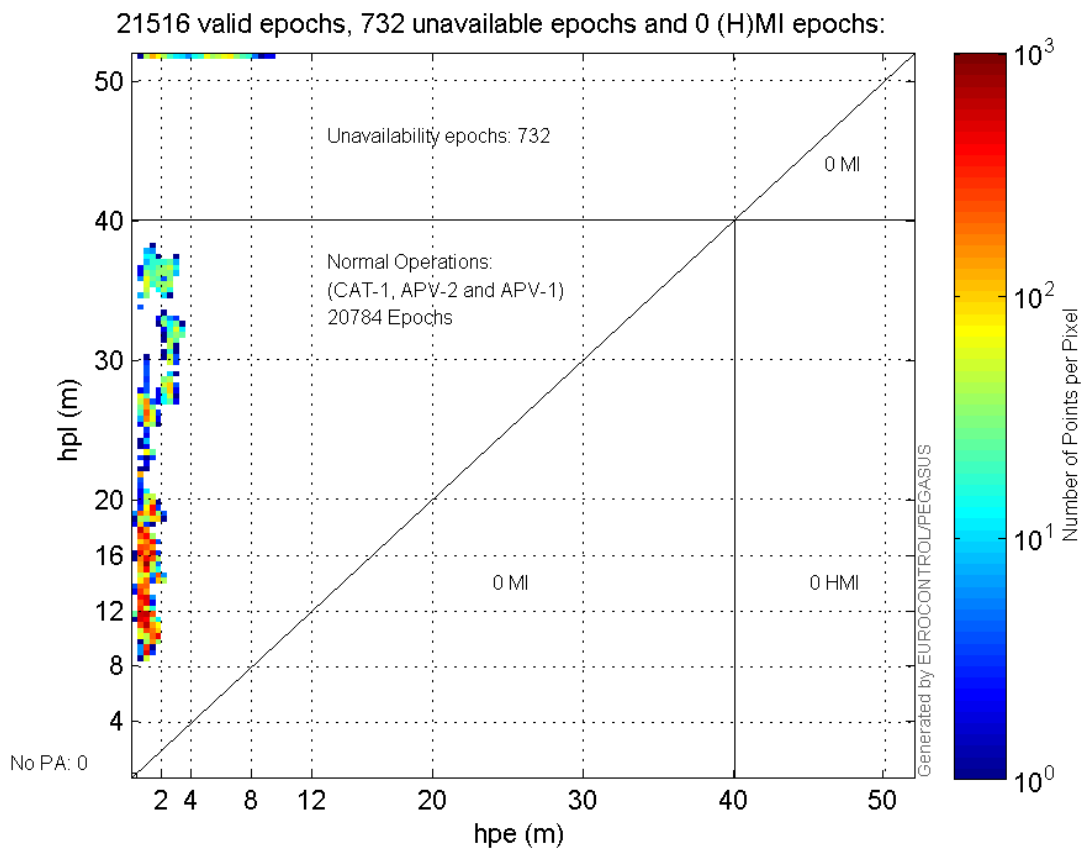


Histogram of VSI LPV200:

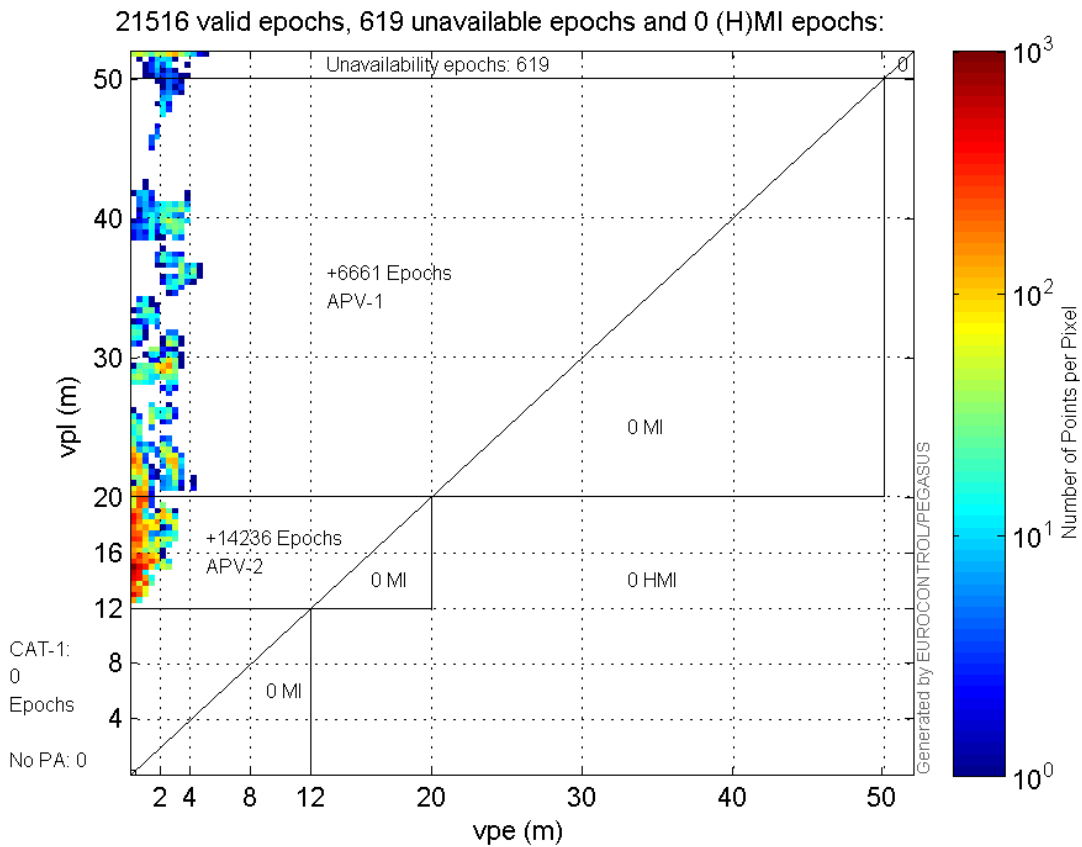


Stanford Plots

Horizontal_Stanford_Plot_SBAS:



Vertical_Stanford_Plot_SBAS:



Parameters

system

Name	Section	Value
name	system	GNSS_Solution
version	system	4.8.2.1
input_prefix	system	D:/PegasusDateGob/job/2015_11_17EGNOS/02_Convertor/02_Convertor
output_prefix	system	D:/PegasusDateGob/job/2015_11_17EGNOS/03_GNSS_Solution/03_GNSS_Solution_sol

settings

Name	Section	Value
ref_lat	settings	50.439
ref_lon	settings	30.4297
ref_alt	settings	215.271
smoothing	settings	yes
smoothing_constant	settings	100
smoothing_max_gap	settings	10
smoothing_max_divergence	settings	3
min_elevation	settings	5
aad_model	settings	a
output_range_file	settings	yes
sbas_prn	settings	120
gnss_mode	settings	sbas

results

Name	Section	Value
init_lat	results	50.4391
init_lon	results	30.4297
init_alt	results	240.6517
mi_numbers	results	0

SBAS Messages

start: 07:47:27.129 17.11.2015 (week: 1871 sec: 200847.129)
end: 13:52:06.129 17.11.2015 (week: 1871 sec: 222726.129)
duration: 06:04:39 ..

quality

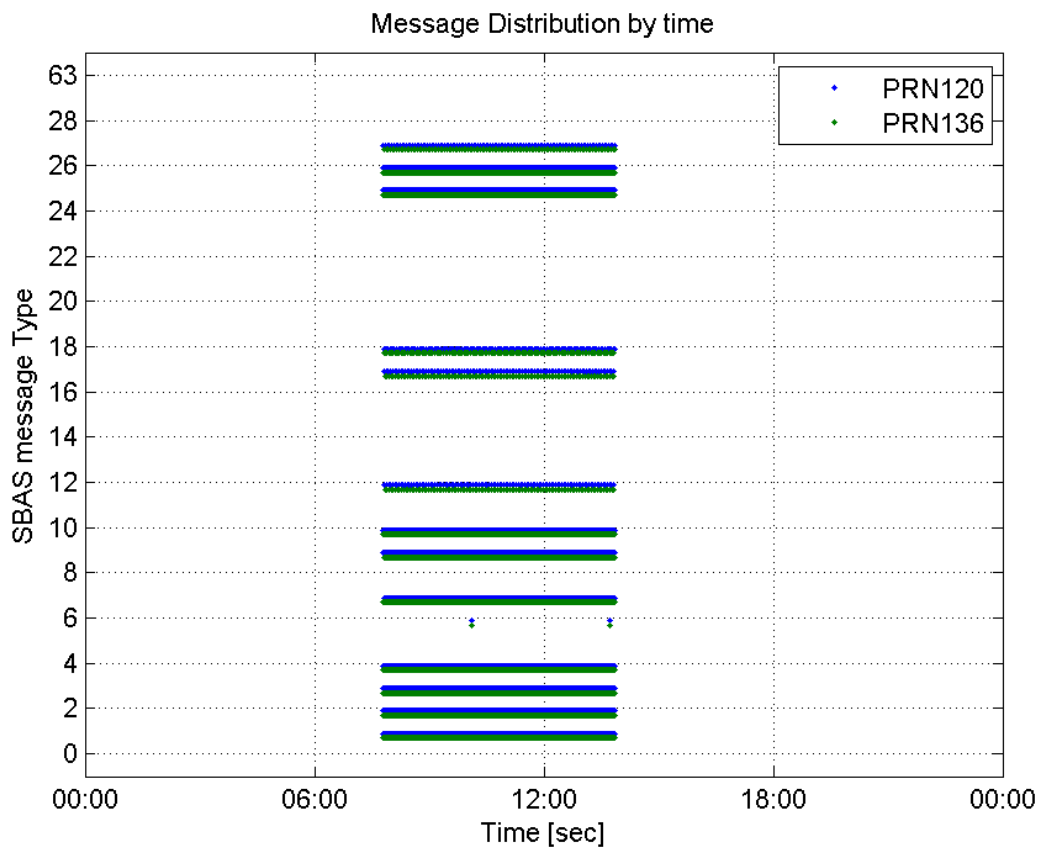
valid samples 43760
total samples 43760
number of SBAS PRNs 2

SBAS SIS Overview

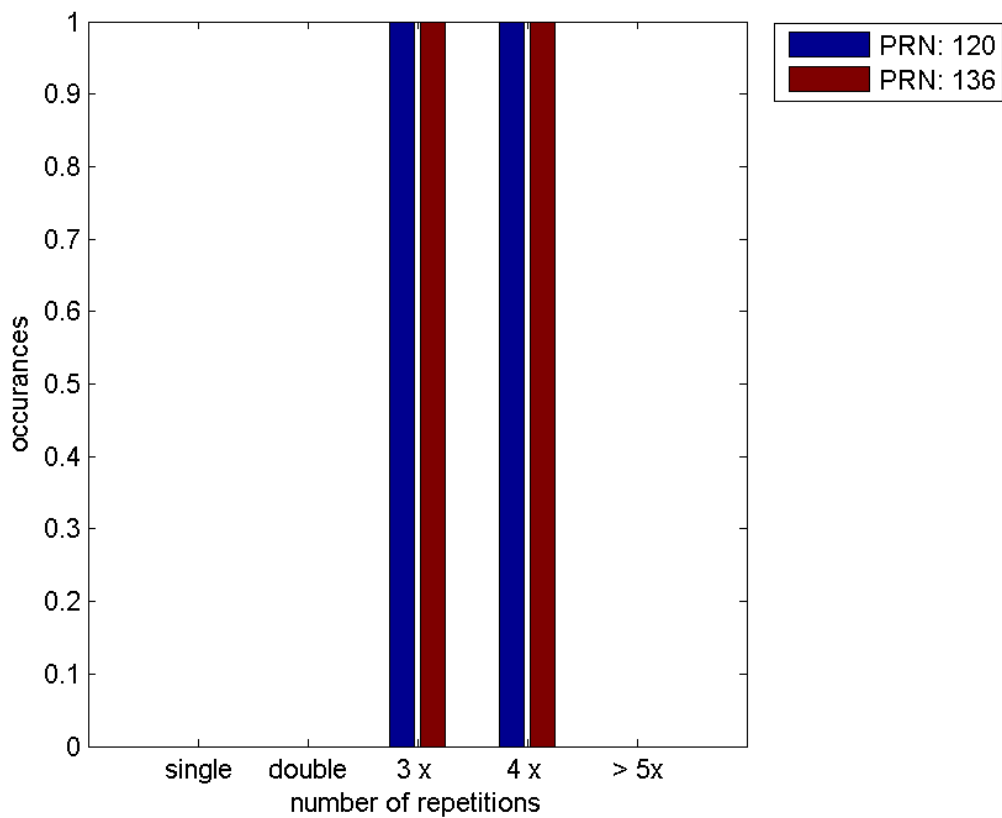
Message Type 6 repetitions :

	single	double	3 x	4 x	> 5x
PRN 120	0	0	1	1	0
PRN 136	0	0	1	1	0

 Message Distribution by time:



Message Type 6 repetitions:



Broadcast SBAS Messages :

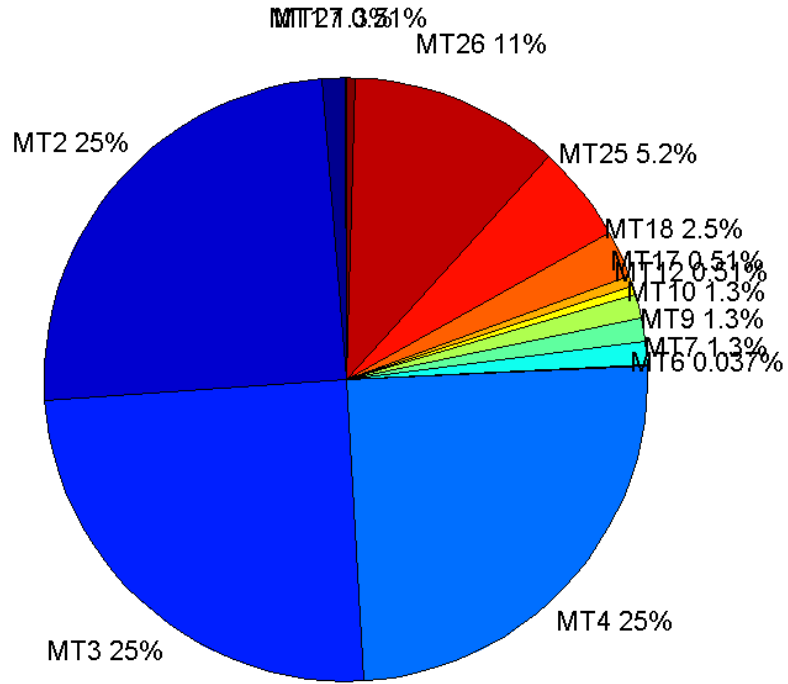
	number of messages	%
MT 0	0	0
MT 1	275	1.25686
MT 2	5433	24.8309
MT 3	5433	24.8309
MT 4	5432	24.8263
MT 5	0	0
MT 6	8	0.0365631
MT 7	274	1.25229
MT 9	274	1.25229
MT 10	275	1.25686
MT 12	111	0.507313
MT 17	111	0.507313
MT 18	557	2.5457
MT 24	0	0
MT 25	1132	5.17367
MT 26	2453	11.2112
MT 27	112	0.511883
MT 28	0	0
MT 62	0	0
MT 63	0	0
Total	21880	100

Update intervals :

	Minimum [s]	Maximum [s]	Mean value	Exceed Max update	Exceed NPA timeout	Exceed PA timeout
MT 0	--	--	--	--	--	--
MT 1	76	81	79.7445	0	0	0
MT 2	4	7	4.02743	2	0	0
MT 3	4	8	4.02725	2	0	0
MT 4	4	8	4.02744	2	0	0
MT 5	--	--	--	--	--	--
MT 6	1	12946	1850.29	1	1	1
MT 7	76	81	79.7143	0	0	0
MT 9	76	82	79.685	0	0	0
MT 10	76	85	79.7299	0	0	0
MT 12	188	202	196.227	110	0	0
MT 17	188	201	196.273	0	0	0
MT 18	4	169	39.1978	0	0	0
MT 24	--	--	--	--	--	--
MT 25	1	60	19.3192	0	0	0
MT						

26	3	40	8.91599	0	0	0
MT 27	188	201	196.27	0	0	0
MT 28	--	--	--	--	--	--
MT 62	--	--	--	--	--	--
MT 63	--	--	--	--	--	--

Message Distribution PRN 120:



SBAS SIS Analysis

PRN 136

Broadcast SBAS Messages :

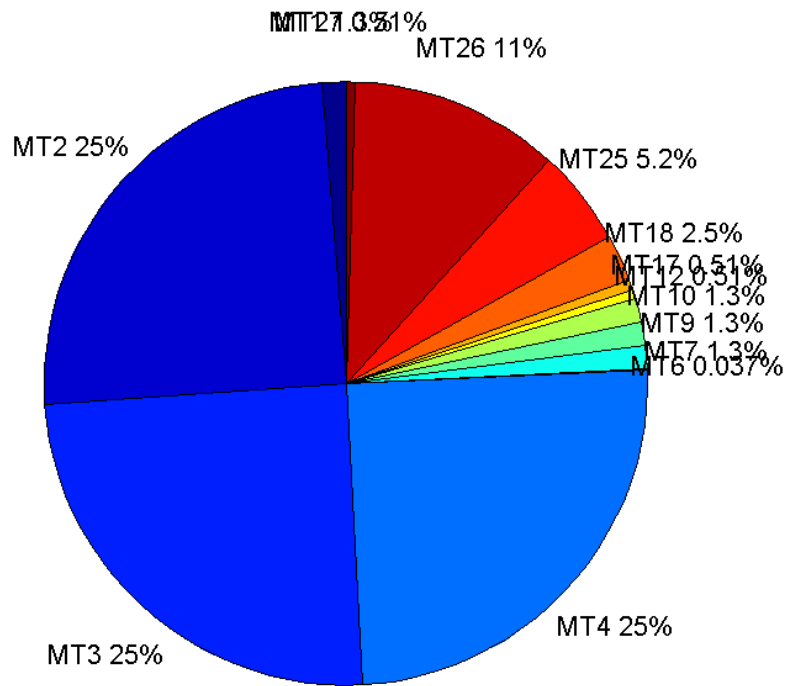
	number of messages	%
MT 0	0	0
MT 1	274	1.25229
MT 2	5432	24.8263
MT 3	5433	24.8309
MT 4	5433	24.8309
MT 5	0	0
MT 6	8	0.0365631
MT 7	275	1.25686
MT 9	274	1.25229

MT 10	274	1.25229
MT 12	111	0.507313
MT 17	111	0.507313
MT 18	555	2.53656
MT 24	0	0
MT 25	1129	5.15996
MT 26	2459	11.2386
MT 27	112	0.511883
MT 28	0	0
MT 62	0	0
MT 63	0	0
Total	21880	100

Update intervals :

	Minimum [s]	Maximum [s]	Mean value	Exceed Max update	Exceed NPA timeout	Exceed PA timeout
MT 0	--	--	--	--	--	--
MT 1	76	81	79.7912	0	0	0
MT 2	4	8	4.02744	2	0	0
MT 3	4	8	4.02761	2	0	0
MT 4	4	8	4.02743	2	0	0
MT 5	--	--	--	--	--	--
MT 6	1	12946	1850.29	1	1	1
MT 7	76	81	79.7482	0	0	0
MT 9	76	81	79.7912	0	0	0
MT 10	76	81	79.8205	0	0	0
MT 12	188	201	196.127	110	0	0
MT 17	188	202	196.091	0	0	0
MT 18	3	170	39	0	0	0
MT 24	--	--	--	--	--	--
MT 25	2	49	19.3679	0	0	0
MT 26	3	56	8.89829	0	0	0
MT 27	185	201	196.072	0	0	0
MT 28	--	--	--	--	--	--
MT 62	--	--	--	--	--	--
MT 63	--	--	--	--	--	--

Message Distribution PRN 136:



Parameters

System

Name	Section	Value
Name	System	Convertor
Version	System	4.3
Inputfile	System	D:/PegasusDateGob/job/2015_11_17EGNOS/01_User/01_User
Outputfile	System	D:/PegasusDateGob/job/2015_11_17EGNOS/02_Convertor/02_Convertor

Configuration

Name	Section	Value
Receiver	Configuration	Novatel OEM4
Leap_Seconds	Configuration	17
Correction_mode	Configuration	SBAS MODE 0/2
Dual_Frequency	Configuration	no